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Internal Maxillary Artery

Recurrent Head and Neck

Highlights

Determinants on Adherence

Metastasis from Lung Cancer

Discovering Thoughts, Inventing Future

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The Influence of Family Related Determinants on Adherence to Feeding Guidelines for Infants Born to Mothers Living with HIV in Rakai District, Uganda

By Dr. Nwanna Uchechukwu Kevin

Victoria University Uganda

Abstract- *Introduction:* In Sub-Sahara Africa, women's personal choices is not the only factor for an infant feeding to be successful, as their spouse and extended members of the family will always contribute their own views whether it is acceptable or not. In addition, for mother-infant bonding to be established, mothers usually choose exclusive breast feeding over exclusive formula feeding.

Objective: The purpose of this study was to determine the family related determinants of adherence to feeding guidelines for infants born to mothers living with HIV in Rakai District, Uganda.

Methodology: Cross-sectional study design was utilized with a sample size of 138 participants which employed quantitative method of enquiry. Consecutive sampling was used to sample the mothers who were HIV positive. Data were analyzed using SPSS to generate bi-variate analysis data.

Keywords: *type of family, population, HIV positive mothers, exclusive breast feeding.*

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The Influence of Family Related Determinants on Adherence to Feeding Guidelines for Infants Born to Mothers Living with HIV in Rakai District, Uganda

Dr. Nwanna Uchechukwu Kevin

Abstract- ***Introduction:*** In Sub-Sahara Africa, women's personal choices is not the only factor for an infant feeding to be successful, as their spouse and extended members of the family will always contribute their own views whether it is acceptable or not. In addition, for mother-infant bonding to be established, mothers usually choose exclusive breast feeding over exclusive formula feeding.

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Methodology: Cross-sectional study design was utilized with a sample size of 138 participants which employed quantitative method of enquiry. Consecutive sampling was used to sample the mothers who were HIV positive. Data were analyzed using SPSS to generate bi-variate analysis data.

Results: Out of the selected sample size of 138 HIV positive mothers, 135 mothers participated actively in the study. Type of family (X^2 =46.281, P-value =0.000), population of household (X^2 =91.960, P-value =0.000), household size (X^2 = 64.038, P-value =0.000) and education level of the household head (X^2 = 78.380, P-value =0.000) were the family related factors found to have statistical significant association with adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district.

Conclusion: Type of family, population of household, household size and education level of the household head were the family related factors that have statistically significant association with adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district.

Recommendations: Laws should be made and enacted by different Governmental and non-governmental bodies to enable HIV patients free of stigma or frustration within the family and the entire community as this will encourage them to do the required activities very well

Keywords: type of family, population, HIV positive mothers, exclusive breast feeding.

I. Introduction

In Sub-Sahara Africa, women's personal choices is not the only factor for an infant feeding to be successful, as their spouse and extended members of the family will always contribute their own views whether it is acceptable or not. (Marembo et al., 2014)[1]. In addition, for mother-infant bonding to be established, mothers usually choose exclusive breast feeding over exclusive formula feeding (Buskens et al., 2007) [2]; (Hofmann et al., 2009)[3]. Nonetheless, adhering to EBF among HIV mothers is challenging. Although breastfeeding is a highly valued practice, mixed feeding, is the norm in most of SSA (Fadnes et al., 2010)[4]. It is therefore not surprising to find that women with HIV are often strongly encouraged and even pressurized by family members to follow this practice (Madiba et al., 2013) [5]; (Mataya et al., 2013)[6]. This highlight the role of the family towards ensuring HIV positive mother adheres to the required breastfeeding practices.

In Africa (South Africa), majority of the HIV positive mothers whom practiced exclusive breast feeding deviated and introduced mixed feeding during the first month of postpartum mainly due to family pressure (Doherty et al., 2006a)[7]. Likewise, in other African Countries such as Cameroon and Burkina Faso, mothers living with HIV introduced mixed feeding for their infants due to societal and environmental (Desclaux et al., 2009)[8]. Similarly, in Nigeria, pressure from family members accounted for mixed feeding among 43% of 42 women surveyed (Lawani et al., 2014)[9]. This reveals the role of the family towards adherence to any stipulated breastfeeding guidelines in every place in Africa.

Social pressure to mix-feed may extend beyond family. In Zambia, Chisenga et al. (2011)[10] research study revealed that out of the twenty (20) mothers living with HIV interviewed a third self-confessed that their extended family members swayed their infant feeding practices which is in ambiguity to the approved recommendations from approved health facilities. However, some mothers did not go astray from the approved recommendations from health facilities irrespective of the societal and environmental pressures they faced to do so, but they did not fully explain and disclose why the remained steadfast to the approved recommendations (Tijou-Traore et al., 2009) [11]; (Madiba et al., 2013) [5]; (Mataya et al., 2013) [6].

According to various researches done, it is a known fact that extended family membersand matrons

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of various unions in the society have a robust impact on infant feeding among HIV positive mothers especially in Sub-Saharan Africa (Buskens et al., 2007) [2]; (Cames et al., 2010)[12]. Unfortunately, these matrons from strong unions in the society, advises these mothers on mixed feeding without the appropriate knowledge and awareness of infection due to HIV and the high risk of Mother to Child Transmission (MTCT) (Hofmann et al., 2009) [13]; (Maru et al., 2009)[14]. As such, HIV positive mothers living with their family whether extended or nuclear are more probable to practice mixed feeding (Doherty et al., 2006a) [15]; (Falnes et al., 2011)[16]. Thus, some of the dynamics that aid mothers living with HIV to repel mixed feeding includes but not limited to full disclosure of their HIV status to their spouse, matrons and extended family members; living in a metropolitan city or another country away from extended family members and regular participation in approved support groups and unions (Østergaard, L.R et al., 2010)[17].; (Falnes et al., 2011) [16]; (Mataya et al., 2013) [6]. There is every indication that the family members predict the choice of the feeding pattern of the mothers, incorporating a new feeding guideline due to HIV infection will require the acceptance of the family members or else it may lead to misunderstanding. Family members are one of the major predictors of breastfeeding.

II. Methodology

a) Study design

This study design was a cross-sectional study with quantitative data collection methods. The cross-sectional study enabled the researcher to collect all the required data at a point. Given that the study focuses on the family determinants of adherence to feeding guidelines for exposed infants among mothers living with HIV in Rakai district, the research was concerned with finding out which is a better predictor variable. So also, the research objectives were used to design questions that necessitated the collection and analysis of the data.

b) Study population

The study population was among mothers living with HIV in Rakai district, Uganda. It was estimated that 1 in every 10 mothers in Rakai district are living with HIV (Rakai district Statistical Abstract, 2009)[18].

c) Inclusion criteria

All mothers living with HIV in Rakai district and are willing to participate in the study.

d) Exclusion criteria

All HIV mothers in Rakai district who were unable to answer the question due to one condition or the other.

e) Sample size calculation

In a study, an estimate of the number of women living with HIV in Rakia district is available, which was around 10% (Rakai district Statistical Abstract, 2009) [18]. The researcher determined the sample size using Kishi and Leslie formula, this method is used because the actual population of a woman living with HIV in Rakia district is unavailable. This method involves the equation below:

$$N = \frac{Z^2 p.q}{d^2}$$ (Kishi and Leshi, 1965)[19].

Where

- n = desired sample size
- Z = standard normal deviate at confidence level of 95% or 1.96,
- P= proportion in the population with (10%),
- Q= 1-p (P is the proportion of the population),
- D = Degree of accuracy desired at (0.05)
- $N = \frac{Z^2.\ p.q}{d^2}$ $N = \frac{1.96^2 x 0.1 x (1-0.1)}{(0.05)^2}$

The n value = 138
So, the sample size for this study is 138.

f) Sampling procedures

Consecutive sampling technique was used to assess the woman living with HIV in Rakia district; consecutive sampling technique involves selecting all individuals who agree to participate, provided they meet pre-established criteria until the number of desired subjects is achieved.

g) Measurement of Variables

i. *Independent Variables*

Family-relateddeterminants: The type of family system was grouped into "Nuclear or Extended family". Husband participation in EMTCT, ANC and ART uptake was grouped into "Yes or No". Household composition was grouped into 1-3, 4-6, 7 and above. Familial support was grouped into "Yes or No". Male partner influence on feeding options was grouped into "Yes or No". Household size was grouped into 1-3, 3-5, 6 and above. The education level of the household head was grouped into primary, secondary and tertiary education.

ii. *Dependent Variable*

Breastfeeding of exposed infant regardless of HIV status: This was determined by asking whether the mothers exclusively breastfed for first six months of life, introducing appropriate complementary foods thereafter, and continue breastfeeding while being fully supported for ART adherence. Those mothers who adhere to the breastfeeding guidelines stated above were grouped under "adhere" and those who did not adhere were grouped under "not-adhere".

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h) Data collection methods

i. *Quantitative methods*

Data were collected using structured questionnaire and with the help of the research assistants. A semi-structured questionnaire was designed that contained all the questions related to the study objectives. When required to interpret the questions for the mothers, the research assistant helped to do so.

i) Data Management

Data collected were analyzed using the Statistical Package for Social Sciences (version 22.0). Statistical calculations were done using bivariate analysis.The bivariate analysis made use of Pearson's Chi-square to establish the relationship between the independent variables and the dependent variable at an alpha level of 0.05.

j) Quality control (Reliability and Validity)

Data collected were passed through several stages before analysis and these included compiling, sorting, editing and coding in order to have the required accuracy, quality and completeness. Editing was done the very day the questionnaires were collected. Completed questionnaires were collected from the respondents, checked for completeness, coded, and entered into the computer, in addition to ensure validity, the researcher pre-tested the questionnaires prior to data collection.

k) Ethical considerations

To protect the research respondents from any negative impact, this research study follows the regulations and guidelines stipulated by the Research Ethics Committee of Stafford University Uganda, which also provided ethical clearance for this research. Following this, permission to conduct the study was obtained from the Rakai district. Hence, in order to uphold high ethical standards, the following measures were adhered to:

Informed Consent – all respondents and participants were notified beforehand of the nature of the research, and their consent was sought prior to the completion of questionnaires.

A statement regarding the purpose of the inquiry was provided to all participants of the study, which outlined the participant's role in the study and how the information they provided was to be used.

l) Limitation of the study

The study may be limited by the information supplied, information bias do occurs when the respondents prefer not to supply correct information example when administering the questionnaires to the respondents; this was curbed by emphasizing on the confidentiality of the information verbally and inclusion in the questionnaire.

The consecutive sampling strategy used in the study may affect the generalizability of the result that was obtained among HIV women, but it was discovered that consecutive sampling method was the fittest for this study considering the study population.

III. Results

A total of 135mothers living with HIV were sampled out of the 138 anticipated sample size indicating a response rate of 98%.

Table 1: Family related determinants of adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district

Adherence to feeding guidelines for infants born to HIV mothers					
Variable	Categories	Adhere	Not-adhere	X^2	P-value
Type of family	Nuclear Extended	15 54	53 13	46.281	**0.000**
Husband Participating in ART, ANT and EMTCT	Yes No	31 38	19 47	3.768	0.052
Population of household	1-3 4-6 7 and above	0 31 38	51 0 15	91.960	**0.000**
Adequate Family support during post-natal activities	Yes No	31 38	19 47	0.172	0.679
Male Partner influence the feeding option	Yes No	31 38	19 47	3.768	0.052
Household size	Large Small	48 21	2 64	64.038	**0.000**
Education level of the household head	Tertiary education Secondary education Primary education No formal education	67 2 0 0	15 35 16 0	78.380	**0.000**

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Type of family (X^2 =46.281, P-value =0.000), population of household (X^2 =91.960, P-value =0.000), household size (X^2 = 64.038, P-value =0.000) and education level of the household head (X^2 = 78.380, P-value =0.000) were the family related factors found to have statistical significant association with adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district (Table 1).

IV. Discussion

Type of family was among the family related factors found to have a statistically significant association with adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district. Type of family predicts the type of activities going on in the family, either nuclear or extended there are certain activities common to them each. Studies have reported that women who were financially independent, living within a nuclear family setting or supported by an HIV-positive partner were more likely to exclusively breastfeed (Doherty et al., 2006a) [7]; (Desclaux et al., 2009) [8]; (Østergaard, L.R et al., 2010) [17]; (Mataya et al., 2013) [6].

The population of household, household size and education level of the household head were among the family related factors found to have a statistically significant association with adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district. The population, size and education level predicts the kind of the activities going on with the family. This is in line with a study that reported that grandmothers and other matriarchs have a strong influence on infant feeding in SSA (Buskens et al., 2007) [2]; (Cames et al., 2010) [12]. Unfortunately, matriarchal advice on mixed feeding is usually given without the awareness of HIV infection and the risk of MTCT (Hofmann et al., 2009) [3]; (Maru et al., 2009) [14]. As such, women living with their mothers or mothers-in-law are more likely to mix feed (Doherty et al., 2006a) [7]; (Falnes et al., 2011) [16]. Factors that help mothers resist mixed feeding advice include disclosing HIV status to partners and mothers-in-law, attending peer support groups, and living in urban areas away from matriarchs (Østergaard, L.R et al., 2010) [17]; (Falnes et al., 2011) [16];(Mataya et al., 2013) [6]. There is every indication that the family members predict the choice of the feeding pattern of the mothers, incorporating a new feeding guideline due to HIV infection will require the acceptance of the family members or else it may lead to misunderstanding. Family members are one of the major predictors of breastfeeding.

V. Conclusion

Type of family, population of household, household size and education level of the household head were the family related factors that have statistically significant association with adherence to feeding guidelines for infants born to mothers living with HIV in Rakai district.

VI. Recommendation

Laws should be made to enable HIV patient free of stigma or frustration within the family and the entire community, this will encourage them to do the required activities very well and will encourage them to share their minds with people close to them in order to receive adequate monitoring and guidance in all their endeavours.

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Pseudoaneurysm of the Internal Maxillary Artery in Recurrent Head and Neck Cancer Patient- A Rare Case Report

By Dr. Vikash Agarwal, Dr. Manas Saha, Dr. Swarupjit Ghata, Dr. Chaitanya Hawaldar, Dr. S K Todi & Dr. Hirak Roy Choudhary

Abstract- Acute bleeding in the head and neck area occurs due to various causes and often is a life-threatening situation. Head and neck cancers can be a cause of intractable hemorrhage from local tumour irradiation or spontaneous tumourbleeding[1]. In addition to tumour-related bleeding, iatrogenic bleeding related to surgical procedures or trauma, can also lead to intractable, life-threatening bleeding[1]. A pseudoaneurysm is an extravascular hematoma that communicates with the intravascular space. This rare lesion receives its name from the fact that its vascular wall is composed of fibrous connective tissue (pseudo-capsule) that develops after rupture of the endothelium[2]. Pseudoaneurysms occur when there is a partial disruption in the wall of a blood vessel, causing a hematoma that is either contained by the vessel adventitia or the perivascular soft tissue[3].

Keywords: hemorrhage, pseudoaneurysm, internal maxillary artery, embolization, interventional radiology

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Pseudoaneurysm of the Internal Maxillary Artery in Recurrent Head and Neck Cancer Patient- A Rare Case Report

Dr. Vikash Agarwal [α], Dr. Manas Saha [σ], Dr. Swarupjit Ghata [ρ], Dr. Chaitanya Hawaldar [ω], Dr. S K Todi [¥] & Dr. Hirak Roy Choudhary [§]

Abstract- Acute bleeding in the head and neck area occurs due to various causes and often is a life-threatening situation. Head and neck cancers can be a cause of intractable hemorrhage from local tumour irradiation or spontaneous tumourbleeding[1]. In addition to tumour-related bleeding, iatrogenic bleeding related to surgical procedures or trauma, can also lead to intractable, life-threatening bleeding[1]. A pseudoaneurysm is an extravascular hematoma that communicates with the intravascular space. This rare lesion receives its name from the fact that its vascular wall is composed of fibrous connective tissue (pseudo-capsule) that develops after rupture of the endothelium[2]. Pseudoaneurysms occur when there is a partial disruption in the wall of a blood vessel, causing a hematoma that is either contained by the vessel adventitia or the perivascular soft tissue[3].The role of interventional radiology is immaculate in the management of aneurysms.

Here we present a rare case of Pseudoaneurysm of the internal maxillary artery in head and neck cancer patient operated previously and its management.

Keywords: hemorrhage, pseudoaneurysm, internal maxillary artery, embolization, interventional radiology.

I. Introduction

Pseudoaneurysm (PA), which is also known as a false aneurysm, is an out pouching of a blood vessel, having actual disruption of 1 or more layers of its wall, as compared to an expansion of all wall layers as in case of a true aneurysm. PA is characterized by residual contrast media retention in the lesion for a long period of time after the arterial phase of diagnostic angiogram is over[4].

Pseudoaneurysm (PA) is a rare life-threatening complication that consists of an incomplete tear of the vessel causing blood flow into the surrounding tissues. If the inelasticity of the surrounding tissues allows a compressive effect, bleeding is counterbalanced by the compressive action, leading to hematoma formation.

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Internal maxillary arterial pseudoaneurysm (IMPA) is rare. The various clinical manifestations of PA include bleeding, cranio-cervical pain, dysphagia, pulsatile mass, hoarseness, asymmetries, neurological deficits, and thromboembolism[5].

The internal maxillary artery (IMA) is the last terminalbranch of the carotid artery. Because of its deep lie, hemorrhage cannot be easily managed by digital pressure. Treatment of such complication can be achieved by interventional radiology through a selective embolization of the vessel, which allows a well-acknowledged management with excellent outcomes[6].

II. Case Report

A 47 year old male previously operated Right Hemiglossectomy+Rt Modified Radical neck dissection post Radiotherapy (2009), presented with pain in left side of tongue with severe trismus.

PET scan revealed lesion in the left lateral border tongue involving the mandible. After all the necessary investigations and obtaining fitness from the anaesthesia team, patient was operated for Left Segmental Mandibulectomy with wide local excision left tongue +Left Modified Neck Dissection and reconstruction done using pectoralis major myocutaneous (PMMC) flap. Patient shifted to ICU post operatively in hemodynamically stable condition.

On postoperative day 2 (POD -2), patient complained of pain in the left side of the face, with frank bleeding from the chest drain area and expanding swelling in the left axillary area. Patient immediately shifted to the operation theatre, neck and chest wounds opened and blood clots removed (Figure 1 and 2).

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Figure 1



Figure 2

After achieving hemostasis fresh drains were placed and flaps sutured back in place. Patient shifted to ITU in stable condition. 1 unit packed red blood cells (PRBC) transfused.

On postoperative day 6 (POD-6), facial swelling was seen on the left side of the face extending from the left corner of mouth upto the left lower eyelid (Figure 3). USG examination revealed collection in left parotid region and aspiration was done to remove the collection.



Figure 3

On postoperative day 8, patient complained of chest discomfort and pain on the left anterior aspect of chest wall, following one episode of cough and frank bleeding in the chest drain along with increased facial swelling on the left side of the face (Figure 4).



Figure 4

CECT of the face and neck was done and discussed with Interventional Radiologist who detected Pseudoaneurysm in the Left Internal Maxillary Artery.

After multidisciplinary approach and discussion with the interventional radiologist, oncology team and plastic surgeon, patient was planned for embolization of the internal maxillary artery pseudoaneurysm. Consent was obtained for the same after discussing with the relatives about the procedure, the risks and the cost involved.

Patient shifted into the operation theatre and prepared in routine surgical manner. Procedure done under local anaesthesia (LA) taking all the aseptic

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precautions after placing the 6Fr sheath. 5Fr vertebral glidecath over 0.035 Terumo wire used for cannulation of the vessels. Left ECA injection showed distal lobulated pseudoaneurysm from left internal maxillary artery with massive extravasation (Figure 5).



Arteriogram showing distal lobulated pseudoaneurysm from left internal maxillary artery with massive extravasation.

Figure 5

Catheter advanced distally and initially partially embolised using diluted gel-foam followed by two 3*30 and 4*30mm coils. Post procedure check injection showed occluded left distal internal maxillary artery and non-filling of the pseudoaneurysm (Figure 6 and Figure 7). Patient shifted to ITU post op and discharged afterwards in hemodynamically stable condition.

Patient underwent Adjuvant radiotherapy and is on regular follow up till date (Figure 8).



Figure 6



Figure 7

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Figure 8

III. Discussion

The IMA is the largest and terminal branches of the ECA. It originates behind the neck of the mandible at the distal ECA bifurcation and is divided into 3 main segments: the proximal mandibular, the middle pterygoid, and the terminal pterygopalatine segment.

The IMA terminates within the pterygopalatine fossa by dividing into branches that supply the deep face andnose. The distal IMA has numerous anastomoses with other ECA branches such as the facial artery and is a major source of potential collateral blood flow from the external to the internal carotid artery via the inferolateral trunk and vidian artery; and anastomoses with the ophthalmic artery via the ethmoid artery[8].

Internal Maxillary Artery Pseudoaneurysms (IMPAs) are rare, which have been documented as a complication arising due to trauma, infections, or a result of maxilla mandibular surgeries. IMPAs are also known to occur due to post radiation vasculopathy or tumour invasion in head and neck cancer patients[7].

Pseudoaneurysm (PA), or false aneurysm, is an uncommoncon sequence of arterial damage, resulting from an incomplete disruption of the arterial wall causing an expanding lesion between the artery and the surrounding tissues. The PA is influenced by three factors: (1) the extent of the tear; (2) the elasticity of the surrounding tissues; and (3) the arterial blood flow[6] .

Radiation therapy affects all sizes of blood vessels within the field of treatment. Degeneration of the endothelium, vacuolization and thickening of the intima associated with changes in the elastic fibres have been described in the radiated arteries of humans. However, vascular occlusion is the most common form of presentation. These changes manifest as early as 4 monthsor as late as 2-3 years after radiotherapy. Since then, Thomas and For bus published the first report of radiation injury to blood vessels; literature review shows many numbers of similar reports of radiation-induced vasculopathy[9].

Computed Tomography (CT) are widely used to evaluate the extension of the maxillofacial trauma and to evaluate the treatment outcome in patients with Head Neck Cancers (HNCs). Although the diagnosis of IMPA depended solely on catheter angiography, CT can directly visualize IMP Alarger than 1 cm; nevertheless, precise detection of IMPA is difficult, especially when it is small or obscured by hematoma or oronasal packing[4].

The role of interventional radiology in hemorrhage control by selective embolization has been well accepted and acknowledged.

The advantages of endovascular embolization include---the same session in the diagnostic angiography andembolization, demonstration of bleeding points, the more distal access to the bleeding points, control of multiple bleeding points, no necessity for general anesthesia in most cases and short procedural time. Also super-selective localization of the bleeding to the IMA allows preservation of all the other branches of the ECA. The goal of embolization is not directed toward cure of the underlying cancer disease, but is palliative for controlling catastrophic hemorrhage and prolonging life, whether caused by tumor, trauma, orpostsurgical complications[4].

An important concept in endovascular management of IMPAs is to deliver the embolic materials precisely to the PAs and a small segment of the affected IMA with the preservation of the branches adjacent to the affected artery and to reduce the risk of ischemia of the face and neck[4].

In regards to the selection of embolicagents for IMPA, a permanent embolic agent that can mechanically obstruct the IMPA is effective. The common permanent embolic agents employed for endovascular embolization of vascular lesions in the head and neck are polyvinyl particle (PVA) foam, microcoils, and liquid adhesive. PVA has been widely used for the treatment of idiopathic epistaxis or for preoperative tumor embolization[4].

Microcoils such as platinum microcoils or Guglielmi detachablecoils (GDC, Boston Scientific, Fremont, CA, USA) have been used successfully to treat intracranialaneurysms or arteriovenous fistulas.12–14 GDCs have the advantage of being very soft and

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retrievable, and can be precisely placed in the affected artery[4].

Selective embolization is a safe and effective method for the treatment of pseudoaneurysms that affect vessels which are difficult to reach by surgery. Also, it reduces the risk of bleeding and revascularization[11].

Complications of embolization-- stroke orblindness, can result from the reflux of embolization material outside the intended area of embolization.

Immediate and late follow-up examinations of our patient did not show any clinical signs or symptoms of complications of internal maxillary artery embolization.

IV. Conclusion

Acute bleeding in the head and neck is a common life-threatening situation. When conventional techniques fail to stop the hemorrhaging, conventional angiography plays an important role in localizing the bleeding foci and controlling the bleeding by endovascular treatment, a safe and effective therapy for the management of hemorrhage.

Early diagnosis and treatment of a pseudoaneurysm is essential to minimize morbidity and mortality.

Conflict of Interest
None.

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Breast Metastasis from Lung Cancer: A Case Report

By AM. Guerrouaz, F. ElMejjati, Z. Dahbi, A Ouabdelmoumen & A. Sbai, L. Mezouar

Introduction- Secondary breast tumors are rare. Breast metastases accounted for 0.4 to 2% of all mammary cancers. Melanomas, lymphomas, and lung cancers are most often the primary tumors [1]. Up to now more than 400 cases of mammary metastasis have been reported in the literature [2,3]. We report in our work the clinical case of metastatic lung carcinoma into breast.

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Breast Metastasis from Lung Cancer: A Case Report

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I. Introduction

Secondary breast tumors are rare. Breast metastases accounted for 0.4 to 2% of all mammary cancers. Melanomas, lymphomas, and lung cancers are most often the primary tumors [1]. Up to now more than 400 cases of mammary metastasis have been reported in the literature [2,3]. We report in our work the clinical case of metastatic lung carcinoma into breast.

II. Case Report

A 51-year-old father of two, consulted for headache, vomiting, and right hemiplegia as part of an intracranial hypertension syndrome.

The initial physical examination objectified a fixed mammary mass of 5cm in size in the right breast, the axillary level was free. A mammogram showed the presence of an irregular opacity measuring 45 mm hypoechogenous on ultrasound without microcalcifications, and without axillary adenopathy classified BIRADS 4.

A biopsy of the breast mass was made, whose anatomopathological results showed an undifferentiated tumor process. Thus, an immunohistochemical study was used which showed a low differentiated squamous cell carcinoma compatible with a lung cancer.

A cerebral and cervicothoraco-abdominal CT scan was performed, showing a right apical pulmonary tumor associated with Barety's lymphadenopathy, and also revealed the presence of a right breast mass (already described in mammography).) and bilateral adrenal lesions in favor of secondary lesions. At the cerebral level there were several bilateral temporoparietal lesions with right verminal cerebellar lesion in favor of secondary lesions.

The patient was admitted to radiotherapy department where he received total brain irradiation at a dose of 30 Gy in 10 fractions of 3 Gy /fr over 2 weeks with marked clinical improvement. Afterwards he was treated with palliative chemotherapy based on Carboplatin AUC 6, Paclitaxel 175 mg / m^2 every 21 days. After the 3rd cycle there was an incomplete remission estimated at more than 70%. The evaluation after the sixth cycle treatment was in favor of stable disease.

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The patient was monitored, and 2 months later there was local, mammary and cerebral progression, so he was treated with second line chemotherapy Gemcitabine monotherapy but after 3 courses the patient presented in a critical state with a WHO score of 3 for whom he was referred for palliative care. The patient died 40 days later.

III. Discussion

Breast cancer is the most common cancer in the world, however mammary metastases from extra-mammary cancer are extremely rare accounting for less than 2% of all breast cancers [2,3,6,22].

Breast metastases may be the first revealing symptom in 8 to 33% of cases [7]. These metastases may be associated with ipsilateral axillary adenopathies in more than 50% of cases [7].

The most frequent primary cancers are melanoma, lung cancer, and lymphoma [4,5]. So far the largest study published is that of Stavros Georgiannos, et al which included 60 patients collected over a period of a century 60/14000 presented with breast metastasis (0.43%), of which 95% are female, their age varies between 12 and 90 years, the primary cancers involved in most patients were cutaneous melanomas, large and small cell lung cancers, but there were other tumors, such as endometrial adenocarcinoma, pancreatic adenocarcinoma, retinal melanoma. Other localization may be responsible of these metastases, including uterine, gastric, rectal cancers, and non-Hodgkin's lymphoma [6,8], the latter represents 17% of all mammary metastases [8]

As for metastases from gastric cancer, they were described by Krichen et al. in a case of a metastatic gastric adenocarcinoma in the ovary, the primary tumor and ovarian metastasis was resected, but after 4 months a metastatic relapse was detected as an isolated mammary metastasis of the same histological type as the gastric cancer, it was resected but the evolution was marked by the apparition of cutaneous lymphangitis of the chest wall, and emergence of lymph nodes and bone metastases [9]. And this is not the only case of gastric cancer, Boutis et al have also reported a series of 25 cases of gastric cancer associated with mammary metastases of which 13/25 has a form of signet cell ring carcinoma [10]. One of the tumors that can metastasize at the breast level are neuroendocrine tumors, the largest series of secondary breast

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neuroendocrine tumors reported by Upalakalin et al. [15] including 24 cases, in nine cases mammary metastasis was the revealing site of the primary tumor.

The clinical presentation of these tumors is most often as a well-rounded, hard, and painless lump located at the level of the supero-external quadrant [6,9,12,13,14]. This lump may be associated with axillary metastases [14,15,16]. As well as other metastatic lesions [15].

The mammography shows aregular round or slightly irregular nodule, not containing microcalcifications except in cases of metastases of ovarian origin [13, 14, 15, 16] and at the mammary ultrasound they appear a hypoechogenic, without acoustic shadowing.

Histologically, intramammary metastases have different characteristics of a primary breast cancer, in fact most intra-mammary metastases have histology similar to that of the tumor from which it comes [22].

For example in the case of metastases from ovarian cancer we ofern found the presence of intra-metastasis microcalicifications [14,16].

But one can be mistaken in making the diagnosis of a primitive breast cancer [17,18,19,20]. To overcome this problem we must use immunohistochemistry that will allow us to differentiate a primary cancer from a metastasis, usually for primitive breast cancer the CK7 is positive, CK20 is negative and the hormone receptors are positives. In the case of metastasis, CK 7 (-) and hormone receptors are negatives [14,15]. To guide the diagnosis to the primary tumor, we can look for certain tumor markers such as TTF1 (lung cancer or thyroid cancer) and desmin (soft tissue tumors) [21]. On the other hand, the elevation of some serum markers can be useful to make the diagnosis: ACE (colon cancer), CA19-9 (pancreatic cancer), CA 125 (ovarian cancer, or gastrointestinal cancer).

The management of mammary metastases must be part of the treatment of the primary cancer in question and consists of palliative chemotherapy, and it may be combined with palliative radiotherapy if needed [22].

Surgical treatment is not indicated in these cases except in cases of primary surgery to make the dignosis[15] or more rarely in the case of a very advanced mammary metastases[17]. Until now there are no studies that support axillary dissection in cases of mammary metastasis associated with axillary adenopathies, and this will only increase postoperative morbidity [23,24].

The prognosis is generally poor and depends on the primary cancer. In the Lee et al study the mean survival in 32 patients with breast metastasis was 13.9 months [15].

IV. Conclusion

Breast metastases are exceptional tumors. Their diagnoses are difficult and require a radio-clinico-pathological arguments. Their treatment consists of palliative chemotherapy and surgical treatment is to be avoided (mastectomy). Their prognoses depend on the primary tumor but are usually of poor prognosis.

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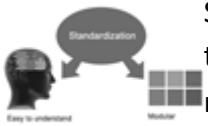


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After nomination of your institution as "Institutional Fellow" and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
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- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone.

"

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Acknowledgments

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- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

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The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

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Author details

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Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

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A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

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One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, “What words would a source have to include to be truly valuable in a research paper?” Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

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Numerical methods used should be transparent and, where appropriate, supported by references.

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Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

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Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

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Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

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3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

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11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

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23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

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Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.



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Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
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Approach:

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Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.



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Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

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Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

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- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

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	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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