Referral of Surgical Patients Abroad: A 5-years Review from a Tertiary Teaching Hospital in Addis Ababa Ethiopia.

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Background: The general objective of this review was to determine the reasons for referral abroad of surgical patients at Addis Ababa University Medical Faculty, Tikur Anbassa Hospital
Methods: The referral slips of patients who were referred abroad from September 2005 – August 2009 by surgical Department were collected and reviewed.
Results: The study reviewed a total of 331 patents in the 5 year period mentioned. An average of 66 patients was referred per year. There was an over all male preponderance 183(55.3 %), majority of patients were in the age group 26 - 50 years (173).Most were residents from the Capital, 232 (70 %). Neoplastic diseases both benign and malignant account for 155 cases. Primary brain tumors either malignant or benign account for 74 cases. 97 of the cases had at least one surgical intervention done prior to referral. The overall trend is showing some decrement. The main reason for referral was for better surgical intervention (249). Referral for MRI which accounted for 16 of the referrals in the first 2 years was virtually non existent in the next 3 years.
Conclusion: Most cases were form the capital, Neurosurgical cases have been referred more than any other subspecialties, neoplastic changes constitute the main reason for referral, and the overall trend seems decreasing along the course.

Introduction

Referring patients to a place where a better management can be given is a long standing element of medical practice. Patients have been referred from one facility to another in search of better handling of cases by well trained practitioners in that specific field. This has both advantages and disadvantages[1]. Referral abroad incurs considerable amount of expense, stress, flights, and interactions with embassies. It also necessitates hard currency, finding good hospitals, lodging…etc; which are significant challenges for both the patients and their families and the country as well[2].

This is apparently evident when it comes to the developing countries that send patients to developed ones .The same applies to Ethiopia who falls short of such facilities. Developing countries spend a lot or investigations and surgical procedures abroad. Patients have to deal with being alienated and language barriers. They may also succumb before destinations as well. In Ethiopia AAU MF being the highest Medical training, research and service center in the country is subjected to handling difficult cases time and again and for the same exact reason has been referring patients for lack of adequate subspecialty fields, experts, equipment, investigative modalities…etc.

Recently different subspecialty fields have been started in the Department of Surgery such as Neurosurgery, Urology and Cardiothoracic Surgery and in the faculty as a whole. As a consequence it is natural for one to wonder if the trend of referral has changed since they were established. In this study we wanted to evaluate:

1. What are the leading disease entities that are being referred?
2. What are the main reasons for the referral?
3. Which subspecialty disciplines in surgery are referring? And which are referring most?
4. What is the trend of referral?
5. How many of the referral cases were intervened before referral?

Subjects and Materials

We reviewed the referral slip records in the Department of Surgery AAU MF for the period of 5 years from September. 2004 to August 2009. Each referral was issued by the Surgeon managing the case with endorsement from two other consultant Surgeons, the head of the department and the Medical Director. The data recorded and analyzed included the following parameters:

- Socio demography (Age, sex, residence…)
- Referring Subspecialty
- Diagnosis
- Pathology
- Whether any intervention made or not prior to referral
- Reason for referral

The Age distribution was stratified on the epidemiological significance (natural disease entity distribution at different age groups) and Socioeconomic factors (adolescents and early adults being brought by parents or guardians) basis into Infants (<1year), Under 5 children (1-5years), Children (6 - 12 years), Adolescents and early Adult hood (13 - 25 years), Younger age group(26 - 50 years) , Older age group (51 - 75 years) and Extreme age group (>75 years). Residence was categorized based on whether the patient lived in Addis or out of Addis Ababa. Referring subspecialty was categorized by the treating sub specialist and the disease entity. The Diagnosis was classified both specific diagnosis and according to the organ involved for instance Thyroid Ca, Breast Ca, Adrenal tumors or the System subspecialties deal with (ex. Genitourinary system, Respiratory System…). Pathologic Classification has taken ground on neoplastic process, infectious process, Inflammatory changes, Degenerative changes, Trauma, Congenital….etc). An endoscopic or open surgical procedure carried out for either diagnostic or treatment purpose was considered as an intervention

Results

A total of 331 patients were referred during the 5-years in the study period. The majority of the patients (173) were in the age group 26 – 50 years (Figure 1). There was a slight male preponderance 183 (55.3 %).

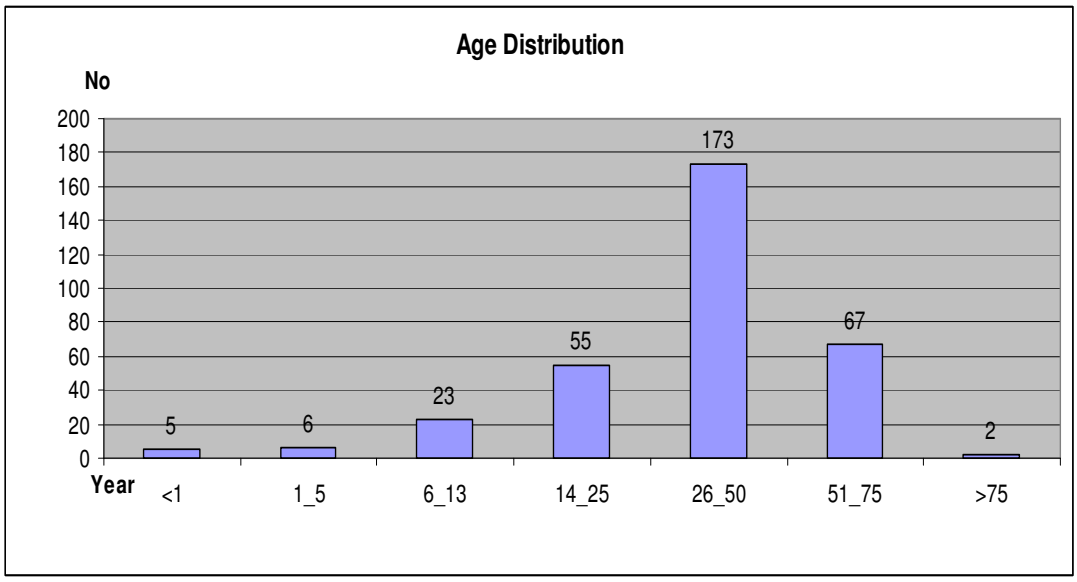

Figure1. Age Distribution

Table 1. Distribution of Referral Cases Based on Pathological Basis.

Diagnosis	Number of Patients
Neoplastic changes	155
Degenerative changes	44
Unspecified causes	37
Congenital	33
Inflammatory conditions	15
Iatrogenic	8
Trauma	7
Functional disorders	6
Unknown cause	5
Infectious	4
Stone formation	3
Thromboembolic phenomenon	3

Table 2. The Top 8 Referral Conditions.

Diagnosis	Number of Patients
Brain Tumors	74
Spinal Cord Lesions	47
Vascular Lesions	35
Intra Cerebral lesions	19
Intra Thoracic Tumors (Lung Ca, Mediastinal Mass …etc)	10
Thyroid Ca (recurrent, involvement of adjacent structures…etc)	10
Intra Thoracic Lesions (Lung destruction……etc)	9
Hepatobilliary Tumors (Cholangio carcinoma…etc)	9

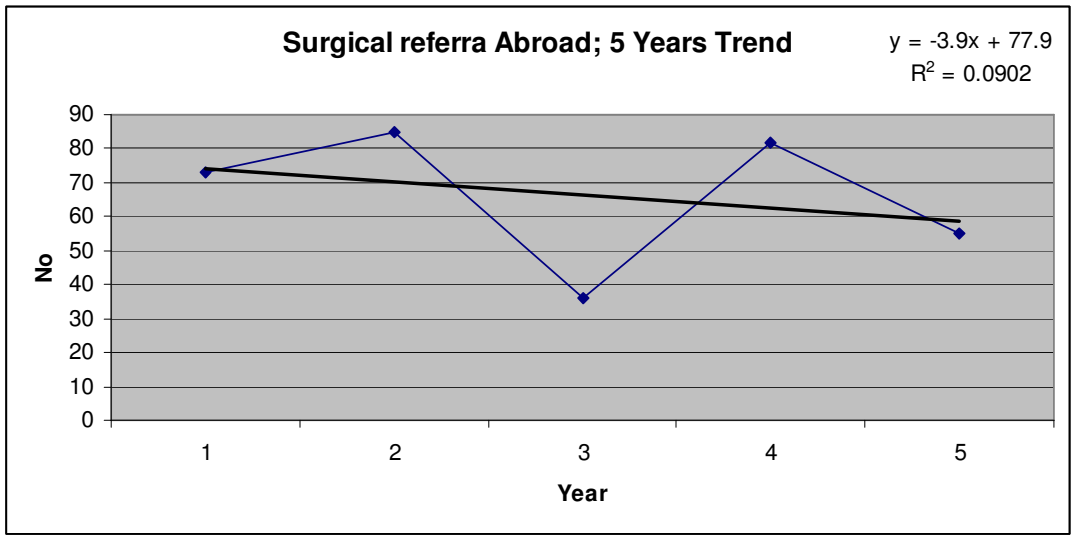

Figure.2. Overall Surgical Referral 5 years Trend

232 (70 %) of the cases were residents of the capital while 81(25 %) were out of the capital and 18 (5 %) of the referral slips did not have specified address.

Neoplastic diseases both benign and malignant accounted for 155 cases being the main pathological class for referral. Neurosurgical cases were the highest number of patients which are referred (155), followed by General surgery (45) and Urology (42).The least number of cases were sent for Plastic and Reconstructive surgery (1), Maxillofacial (2) and Cardiac surgery (2)

The leading disease groups were primary brain tumors either malignant or benign, followed by Vascular lesions such as stenosis, AV fistulas and aneurysms and Intra cerebral lesions for example aneurysms and seizure disorders. In all, 97 of the cases had at least one surgical intervention done prior to referral. The overall trend is showing some decrement (Fig.2) Urology and Neurosurgery confirm to this trend while General surgery and Pediatric surgery have shown increment rather.

Reason for referral ranged form for renal transplant (1) to better surgical intervention (249) and Investigation (49). Referral for MRI which accounted for 16 of the referrals in the first 2 years was virtually nonexistent in the last 3 years.

Discussion

The three main departments in Addis Ababa University, referring patients abroad are: Internal Medicine, Orthopedics and General Surgery[3] and it was well observed that most of these referrals would have been avoided provided that we the Hospital had wide range of sub-specialty consultants. In Similar African countries, consultants who came back from advanced training in developed countries have helped stop un-necessary referrals abroad and saved a lot of hard currency[4]. In face of under staffed units, patients are forced to go abroad or higher mortality rate will be a dismal prognosis[5]. The average number of surgical patients being referred per year (66) is relatively lower than the number of cases referred by the Orthopedics department in 2008 (115). This could be attributed to more number of, relatively, available subspecialty disciplines and expertise in the surgical department. Easy access to health facilities ,investigations centers, better level of awareness and better socioeconomic status may explain the significant number of patients coming out of the capital , Addis. Neoplastic diseases mainly malignant ones continue to be of significant challenge by requiring better diagnostic evaluation, combined modality management approaches (surgery , Chemo radiotherapy, hormonal therapy) and recurrence. This is evidenced by the ongoing study of pattern of Surgical admissions in our department[6].

Neurosurgery as it is marked by inaccessibility due to the rigid cranium, need for delicate handling, good equipment and most being Neoplastic changes with possibilities of incasing major vessels or so will explain why the high number of referral cases abroad. The fact that Departments like Plastic and Reconstructive surgery, Maxillofacial and ENT surgeries are located in other hospitals may have contributed well to the point that they have fewer referrals as these cases are being referred directly from the hospital they are located in.

The number of Cardiac patients' referral could also be explained by the fact that most cardiac patients are referred via the Cardiac foundation or via the Internal Medicine department. The overall trend is decreasing ($R^2 = 0.09$), not statistically significant, which may be partly attributed to the newly introduced subspecialties as evidenced by same pattern in Neurosurgery and Urology. Additional recruitment of both national and foreign surgeons to the department may have greatly contributed to this decrement.

Availability of MRI and relative abundance of CT may have contributed in part as settling diagnosis could have become easier than ever, there by interventions can be carried out here with out a need for referral. Still few subspecialties and even fewer super subspecialties, long waiting list and probable lack of confidence form the public in the general medical practice may be the driving forces for the slight decrement of referrals abroad despite the introduction of subspecialties. Medical tourism has

made referrals very simple and it is nowadays combined with a "safari" trip, weather African Hospitals would be sites for referrals is a question of time[7].

Conclusion

There is statistically insignificant trend on the referral to make any firm conclusion the over all trend of referral, however, seems decreasing for the last 5 years. Most cases were form the capital, Neurosurgical cases have been referred more than any other subspecialties, Neoplastic changes constitute the main reason .Availability of better and newer investigative modalities seem to decrease referral of patients for investigation purposes, while there seems to be no contribution for apparent increase for referral.

Recommendation

1. Expansion of Subspecialty training in surgery can keep or may hasten the slightly declining trend of sending patients abroad. Expansion may include training young surgeons or recruiting expatriates and giving additional training to the existing professors.
2. Equipping the Medical School with better operative and investigative modalities may at the end decrease the number of referrals as well.
3. It may be prudent to communicate with the public to gain the confidence in the general medical practice and make the institution competent as well.
4. The overall data management in the hospital may better be upgraded.

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