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Short Communication

Bridging the Gap to Combat Cancer: Dr. Anshuman Kumar

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Dr. Anshuman Kumar is a pioneer in the field of Oncosurgery in our country. He has been enthusiastically training maxillofacial surgeons in the hope of bridging the gap between dental and medical professionals and working day and night towards his one of the many goals.

Bridging the gap basically means "To connect things in a logical way; to fill in a space between two things. Essentially, at its minimal meaning, bridge the gap means to diminish the differences between two things".

He has a discerned approach towards Head and neck cancer surgeries. Thousands of dentists have been trained for prevention, early diagnosis and management of head and neck cancers under his able guidance.

After completing his education from premiere institutes of India and U.K (MRCS, Edinburgh), he has fully devoted himself in the service of its motherland India and its people day and night. Not just regular surgeries, he is proficient at exploring clinical and surgical techniques and strives to work hard for evolving protocol for management of complex cancers.

He is the designated faculty for DNB (surgical oncology) and fellowship head and neck oncology. His area of interest in cancer surgeries includes Head and neck and esophagus having performed more than 8000 surgeries till date. He periodically conducts hands-on programs, delivers lectures globally on cancer management, vigorously participates in media debates for issues related to cancer and health. He is ardently involved in infinite programmes, campaigns, camps, walkathons and workshops for early detection of cancer by creating awareness amongst professionals as well as common man. He is putting in endless efforts to improvise the earliest diagnosis and management of cancer for especially in developing nations. He is not just creating awareness about cancer but also trying his best to fight against the epigenetic causes of cancer.

Dr. Anshuman is one of the great leaders who has struggled with the challenges of leadership and faced countless hurdles to begin the head and neck fellowship program for the post graduate dental students with a vision of bridging the gap and eventually helping the sufferers. Like a true leader and mentor, he has been an inspiration and example for others to follow. His actions spoke louder than his words when he determinately commenced the fellowship program. Under the guidance of Dr. Anshuman Kumar, the head and neck oncology fellowship program has trained and prepared and still year by year preparing chosen post graduate dental students to combat "cancer" skillfully and confidently.

The fellowship program is carried out in the following areas:

- Clinical Fellowship in Head and Neck Oncology.
- Clinical Fellowship in Surgical Oncology (Onco Reconstructive).
- Research Fellowship in Head and Neck Oncology.
- Research Fellowship in Head and Neck Onco-pathology.

The eligibility criteria for post graduate dental students for the various fellowship courses is - MDS (Oral and maxillofacial surgery) for Clinical Fellowship in Head and Neck Oncology, MDS in Oral Medicine and Radiology for Research Fellowship in Head and Neck Oncology and MDS in Oral Pathology for Research Fellowship in Head and Neck Onco-pathology.

The insightful curriculum has been designed in a way to gain maximum knowledge and experience can be gained by the fellows.

For the Oral and maxillofacial surgeons, observing and assisting Dr. Anshuman during the surgeries, clinical OPDs, procedures and management of patients pre-operatively, intra-operatively and post- operatively remains the main target of the program.

The usual reason for loco-regional recurrence of cancer is positive/insufficient distance of resected margins. Dr. Anshuman has paid utmost attention to adequacy of resected margins in his surgeries and he obtains an intra-operative consultation from the pathologists using the frozen sections done in the pathology department. This ascertains and doubly confirms the margin status and adequacy of margins of the resected specimen in his surgeries. The practice of intra-operative consultation corroborates the surgeon's surgical resection and ampleness of the negative margins. This will eventually make the fellows under him confident about sufficient negative margins even in the absence of frozen sections availability. This entire training will prepare the fellows to combat cancer from all fronts, reducing patient morbidity and increasing disease free survival in even rural areas of the country.

Dr. Gaurav Singh who was Dr. Anshuman Kumar's first head and neck surgical oncology fellow shares his experience as below.

"Journey from maxillofacial surgeon to head and neck onco surgeon- Today in 2020 when I look back and see my journey from a freshly passed maxillofacial surgeon to the present day as HOD of Oro-maxillofacial onco-surgery in Superspeciality Cancer Institute and hospital. It is like an impossible dream which I have saw in 2010 after meeting Anshuman sir. Though I had completed my post-graduation from a reputed college of India, but when I use to compare myself with medical colleagues, I always found a gap which lowered my confidence and as a result it was reflected in my professional performance.

Things in my life changed drastically in 2009 when I met Anshuman sir and I was so influenced by his persona and surgeries that I decided to do Fellowship in head and neck onco-surgery under him in spite of no interest in oncology.

Although I started my fellowship with a big question mark that, will I be able to perform cancer surgeries independently after completion of fellowship or not?

But believe me it was fun to work with sir. His aura is so positive that you never feel tired and he has magical ability as a teacher, I never came to know that over a period of few years how and when he has transferred his surgical skills to me.

His clarity of thought process, ability to perform a procedure as many times with perfection and making complicated procedures look very simply make him different from other. His SOP's of doing small or large procedures are so fixed that it is very easy to follow them with good surgical outcome.

Sir is so down to earth that he has taught me like nursery child by holding my hand, from small procedures like suturing, drain placement to complicated resections and endoscopic biopsies.

He not only teaches you surgical skills but groom your overall personality. One thing which is unique about sir is that he has never shouted or scolded me over last 10 years.

The gap which I use to feel before my fellowship has now been bridged and I am able to perform onco-surgeries with good overall results.

Whatever I have achieved today is just because of your support and guidance. I thank you sir for being such a wonderful teacher and mentor for me. - Dr. Gaurav Singh".

Dr. Anshuman has assigned the responsibility of OPDs, for Oral Medicine and Radiologists fellows, for diagnosis and education of patients and, radiological correlation for each case at the same time. It happens not only in the hospital but numerous camps.

The outreach camps and programs are aimed at earliest detection of pre-malignant and malignant lesions in areas where the healthcare facilities are limited. The individuals are extensively screened, and any abnormality detected is further followed up and investigated.

The fellows can also master the technique of management of pre-malignant lesions using the lasers. The technique assures decreased incidence of conversion to malignancy. Also, the patients are well followed up. All this not only helps in early diagnosis but also its Dr. Anshuman's way of giving back to the society. At the same time his motto to inculcate a sense of social and preventive responsibility in the budding health care professionals. This way he is once again fulfilling the expectations of a great individual and leader.

Testimonial from his very first community oncology fellow (Oral Medicine and Radiology post- graduate) - Dr. Apala Baduni is enclosed hereby- "Oral cancer was a topic which always interested me that interest increased during my internship, when I saw young people of my age coming to the OPD with oral cancer and pre-cancer. I chose to follow my interest and pursue Oral Medicine and Radiology for my post-graduation. In the 2nd year our batch was posted in the Surgical Oncology department with Dr Anshuman Kumar sir. Although just for a week those surgeries were a mind-blowing experience for me.

At the completion of my post graduation I had decided that I will not follow the conventional way; but I will do something to curtail the incidence of oral cancer in India, especially in slums and rural areas, which can be easily curbed by early diagnosis and awareness.

I went to Dr Anshuman Kumar and sir, graciously accepted me as the first fellow from the department of Oral Medicine and Radiology.

Dr Anshuman Kumar sir is a sea knowledge, who knows everything under the sun. I learnt to be open-minded and not just understand the modern medicine but to amalgamate it with the knowledge given to us in "Vedas". However, sir taught me never to become a blind follower but always understand and develop a scientific temper.

During the 6 months period I learnt a lot about cancer, right from the diagnosis, to comparing the radiologic features to the surgical site, from dealing with the psychological aspect of the patient when it comes for tobacco cessation to breaking bad news to the patient, every day for me was a learning experience. I was groomed to handle tough and tricky situations which seem to be small but can have a long-lasting effect on the patient.

After 6 months of my fellowship, I registered my non-profit organization Ekohum Foundation, which deals with early oral cancer detection and tobacco cessation.

Founded in 2017, Ekohum Foundation's efforts have led 2100+ individuals to be aware of the use of tobacco and its role in oral cancer. Through their screening and detention camps, they have screened over 1700 people. When assessed on the Fagerstrom Test of Nicotine Dependence, 45% of tobacco users underwent de-addiction counseling with Ekohum showing a reduced dependency on tobacco.

I was able to pursue my dreams, because of the confidence given to me by sir, this experience brought clarity in me of what I wanted to do in life. Dr Anshuman Kumar sir is a tough task master, but whatever I have achieved not just as a professional but also as a person a large part I owe I to him. - Dr Apala Baduni -Secretary Ekohum Foundation".

Lastly, the fellows of oncopathology (postgraduates in Oral and maxillofacial pathology) are trained and skilled in Surgical and anatomic pathology. Surgical pathology is the most crucial and time-consuming area of practice for most anatomical pathologists. Dr. Anshuman has created the course where the fellows get a lifetime opportunity of attending the live operation theatre apart from routine pathology lab chores. Here they get to see the orientation of the tissue in the patients rather than the usual formalin fixed life like samples. This helps in visualizing the exact tissue orientations followed by intra-operative frozen section assessment of the specimens which is done in the pathology department and then following up until the final histopathology report is made. This gives the fellows a holistic approach towards the cases/patients by providing comprehensive and integrated visualization of the specimens both live in OT and fixed.

For example, usually orienting a modified radical neck dissection specimen is a hard nut to crack for most pathologists (general as well as maxillofacial pathologists). Gross orientation of neck dissections received in the pathology laboratory may be somewhat challenging since the anatomic landmarks for the division of levels are lost in most situations. Thus, the surgeon should divide each group and submit them to the pathology laboratory separately for optimal delineation of the lymph node levels. However, often neck dissections are sent en bloc to the gross laboratory.

The preferred approach for neck dissections is to begin with level I and then level V as both these levels can be easily separated from the Sternocleidomastoid muscle (SCM). Levels II-IV can then be dissected from the deep to superficial aspect along the SCM. However, with the emergence of Modified radical neck dissection type III, the SCM is preserved leaving the pathologists without any guide for identifying different levels.

Here, in the case of a radical neck dissection supero-inferior orientation is possible since the submandibular gland will denote level I and superficial-deep orientation is possible since the sternocleidomastoid muscle is superficial, while the internal jugular vein is deep. Orientation becomes even more challenging with selective dissections that do not contain level I. Methods to provide orientation include submitting the neck dissection on a laminated template delineating each level or using a suture to denote one end. However, when these are not provided, orientation becomes essentially impossible, and even the surgeon may not be able to recreate the orientation after the specimen has been removed. If there is a clinically positive node on review of the history that is radiographically designated to be in a particular lymph node level (i.e. there is a 2.0 cm PET positive lymph node on level IV), this can serve as a landmark on the specimen.

Additional elements, though not completely reliable, may also facilitate orientation of the neck. While the surface of the neck dissection on which the sternocleidomastoid rests is often smooth, the posteroinferior portion of a neck dissection that normally corresponds to the supraclavicular fossa typically consists of more loose, delicate fibroadipose tissue which can be useful in indicating level IV and VB. Also, anthracotic lymph nodes, if present in the neck, tend to be in the lower levels. Finally, accessory parotid tissue or salivary inclusions are more common in level II and can serve as yet another useful landmark. But with training of pathologists in the OT and observing how the different lymph node levels are oriented and aligned in the patient, it gets comparatively easy to orient the levels post fixation also.

According to the Royal College of pathologists, for each anatomical level the following should be described:

- Lymph nodes- Retrieved from resection specimen.
- Describe anatomical level.
- Number of lymph nodes retrieved per level and per cassette.
- Maximum dimension of largest metastatic deposit.
- Note the presence of obvious tumour and any extracapsular spread recording the distance to the closest margin and involvement of other structures.

Separately submitted specimens:

- For each container, record specimen number and designation.
- Collective size of tissue in three dimensions (mm).
- Number of lymph nodes submitted.
- Maximum diameter of each (mm).

This practice of reporting the cervical lymph nodes level wise helps in identifying the level at which metastases has occurred if there. Also, this forms an important parameter in deciding the field area in neck for adjuvant radiation therapy (which is determined based on various histological factors).

Also, Dr. Anshuman Kumar passionately believe in the process of sending all his resection specimens for intra operative consultation via frozen sections. The frozen section procedure is a pathological laboratory procedure to perform rapid microscopic analysis of a specimen. It is used most often in oncological surgery. The examination is made while the patient is under anaesthesia on the operating table. This involves gross inspection and, if it is a larger specimen, some dissection will be performed. Depending on the surgeon's inquiry and what the pathologist felt is necessary; a frozen section (FS) may be performed on the specimen and examined under the microscope. The examination report will then be conveyed as soon as possible to the operating surgeon via telephone or intercoms and the result will greatly influence the surgeon's intraoperational decision.

It is not too much to say that frozen section may be one of the most important procedures performed by the pathologist which is nonetheless a difficult procedure. The pathologist must arrive at a correct decision in a shorter duration under pressure based on his experience, judgement and the knowledge of his specialty and clinical medicine. At the same time, he should keep avid information regarding the limitations of this method as the patient's life is often dramatically influenced by his report. Adequacy of surgical margins is particularly important in large resections in a case of malignancy. In a complicated operating site such as in the head

and neck, margin clearance of a malignant lesion has a pivotal role because tumor recurrence can be very aggressive and difficult to treat.

The specimens resected by Dr. Anshuman are assessed in the Pathology laboratory by the pathologists in order to ensure sufficient and negative margins minimizing the risk of loco-regional recurrence. The onco-pathology fellows assess the specimen along with and under the guidance of the pathologists. The fellows examine the specimen which they saw in the living patient now outside the patient. They develop an excellent sense of orientation of complex resection specimens. These fellows also gather ample exposure of reporting frozen sections which are sometimes very tricky. According to literature search, usually the accuracy rate is around 92% to 98% depending on type of cases studied. Thusly, the oral and maxillofacial pathologists get an extensive training in surgical and anatomic pathology which is usually a weak point in their post graduation curriculum [1-3].

Conclusion

The program started by Dr. Anshuman Kumar has brought about revolutionary changes in clinical examination, early diagnosis, management and prevention of head and neck cancers. Dental graduates and postgraduates are usually the first ones to encounter the problems occurring in the head and neck region. Therefore, Dr. Anshuman's initiative to target and terminate the disease at its earliest is a boon for the patients and our country.

I, Dr. Garima Rawat was extremely fortunate to be the first fellow being trained in Head and neck oncopathology and surgical pathology under Dr. Anshuman Kumar. The above compilation is a verbatim of what all I have learnt from sir both practical and theoretical understanding. I fell short of words while attempting to describe my journey of six months fellowship under Dr. Anshuman, though I hope I have done justice to the infinite efforts being put in by sir.

To conclude, more and more such fellowships should be promoted to help our healthcare field and eventually being a blessing to our patients. This is something not like the conventional ways but something that will definitely help to curtail the incidence of oral cancer in India, especially in slums and rural areas, which can be easily curbed by early diagnosis and awareness.

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