I - INTRODUCTION

The diagnosis of nasopharynx tumours was improved with the use of rigid and flexible endoscopy. However, the anatomy of this region associated to the exigity of symptoms difficult the recognition of the disease at an early stage and the promptly identification of recurrence.

Contact Endoscopy allows an in vivo and in situ observation of the micro vascular network and superficial cellular layers of the mucosa. Since 1993 (Andrea, Dias) contact endoscopy has been systematically performed in laryngeal diseases. In the following years the technique was naturally used in other ENT territories. The authors report their experience in the nasopharynx mucosa. The objective of this study was to evaluate the importance of contact endoscopy in the diagnosis and follow-up of nasopharyngeal carcinoma.

II - MATERIAL AND METHODS

The authors performed (since 1998) a double blind study (contact endoscopy/histology) in a population of 41 patients with nasopharyngeal carcinoma (T1=5; T2=18; T3=9; T4=9). A prospective study was also executed: two groups of patients were considered, one to evaluate diagnosis ability; group 1- n=46 patients - 41 with clinical and radiological suspicion of carcinoma and a control group of 5 patients without disease. Another to assess the importance in follow-up: Group II- n=62 (T1=9; T2=28; T3=18; T4=15) patients with diagnosis of nasopharyngeal carcinoma treated with chemotherapy associated to radiotherapy (nine years follow up).

Contact endoscopy was performed through the nose, usually under topical anesthesia and using a contact rhinoscope Karl Storz 7215 AA and 7215 BA (0º, 30º) after staining the surface of the mucosa with methylene blue (60X, 150X magnification).

During follow-up (1998-2007) there were 12 local recurrences in our population (n=62). In 11 cases, Contact Endoscopy allowed a guided biopsy of the lesion and in 1 case, in which there was no clinical suspicion of recurrence, CE showed a typical hyperchromatic nucleus with increased and irregular dimensions and shape. The nuclear/cyttoplasm ratio is increased and variable. Sometimes the nucleus appears to fill the entire cell with almost no cytoplasm, forming groups of malignant stinucleal cells. Prominent nucleioli and abnormal mitosis can also be seen. The diagnosis of carcinoma also has to take into account vascular parameters. In cases of difficult access to cellular parameters as in some ulcerated lesions, submucosal or hemorrhagic lesions: the vascular assessment (Fig.2 c,d) can be extremely important to the diagnosis. The normal vascular architecture is disturbed showing a completely irregular arrangement of the vessels, with an atypical shape, increased diameter, wall ectasies, thrombosis, an irregular kinetic of red blood cells circulation.

III - RESULTS AND DISCUSSION

Several cellular and vascular parameters could be assessed: nucleus shape, dimensions and staining, nuclear/cyttoplasm ratio, the presence of abnormal mitosis and nucleioli. The major vascular characteristics are vascular network regularity, and circulatory kinetics. Regarding these parameters it was possible to establish normal and pathological patterns. Normal pattern (Fig. 1) is characterized by the presence of normal ciliated epithelium, especially in the nasopharynx lateral wall. In some regions with heavier exposure to airflow the mucosa may be covered only by squamous epithelium, such as the posterior wall of the nasopharynx. The excretory duct of the glands can also be observed, especially at the lateral wall and over the torus tubarius.

In contact endoscopy, carcinoma presents (Fig.2) with an heterogeneous cellular pattern (myxoid, atypical, disorganised). The higher magnification (150X) allows the observation of typical hyperchromatic nucleus with increased and irregular dimensions and shape. The nuclear/cyttoplasm ratio is increased and variable. Sometimes the nucleus appears to fill the entire cell with almost no cytoplasm, forming groups of malignant stinucleal cells. Prominent nucleioli and abnormal mitosis can also be seen. The diagnosis of carcinoma also has to take into account vascular parameters. In cases of difficult access to cellular parameters as in some ulcerated lesions, submucosal or hemorrhagic lesions: the vascular assessment (Fig.2 c,d) can be extremely important to the diagnosis. The normal vascular architecture is disturbed showing a completely irregular arrangement of the vessels, with an atypical shape, increased diameter, wall ectasies, thrombosis, an irregular kinetic of the blood cells and an extreme vascular fragility. In 39 patients the diagnosis was coincident with histology. In 2 cases of carcinoma the diagnosis could not be achieved by contact endoscopy due to mucosal fragility and bleeding.

IV - CONCLUSION

Contact endoscopy is a non-invasive technique performed in vivo and in real time which has a high potential for early diagnosis of nasopharyngeal carcinoma. Contact endoscopy allows the detection of atypical cells and abnormal vascularization areas, helping diagnosis and permitting the selection of suspicious areas to biopsy. In our opinion Contact Endoscopy has also an important role in follow up because can promote, not just a regular macroscopic observation but also an easy and frequent microscopic control allowing an earliest detection of recurrence.

BIBLIOGRAPHY


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