

MODIFIED RADICAL NECK DISSECTION. CLINICAL CASE

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Keywords: modified radical neck dissection, malignant cervical adenopathies, cervical lymph nodes, tumour process
Abstract: The purpose of all therapeutic procedures that are part of the multimodal treatment of malignant tumour process from the Oral & Maxillofacial (OMF) region is getting the patient's healing or at least getting a palliative effect. Regarding OMF surgery, there is a major difference between excisional and curative principles.

INTRODUCTION

Cervical neck dissection is an essential surgical procedure of loco-regional therapy, involving both the primary tumour and the loco-regional extension, in our case the extension being represented by a malignant cervical adenopathy (ganglions together with the submandibular gland, superficial and middle cervical fascia, muscle, vessels, cellular-adipose tissue).

Described by Bocca in 1975, modified radical neck dissection keeps one or several structures, which do not belong to the lymphatic system, such as the spinal nerve, sternocleidomastoid muscle, the internal jugular vein, but at the same time, it removes the submandibular, submentonier, jugular superior, middle and inferior lymph nodes, as well as the lymph nodes located around the lower part of the spinal accessory nerve and along the transverse cervical vessels, respectively, there are removed the same lymph nodes groups as for radical neck dissection.(3)

According to Medina, this type of neck dissection is divided into:

- subtype I - lies in conservation of the accessory nerve;
- subtype II - carries out conservation of accessory nerve and internal jugular vein;
- subtype III - carries out conservation of accessory nerve, internal jugular vein and the sternocleidomastoid muscle.(1)

Modified radical neck dissection indications:

- adenopathy less than 3 cm in diameter;
- neoplastic process previously located;
- prophylactic neck dissection in N0;
- swollen lymph nodes clinically, on the most affected side, there is performed a radical neck dissection, and on the opposite side, less affected, there is performed a modified radical neck dissection.

Among the advantages of these surgical techniques include:

- reduced deformity and morbidity;
- reduced postoperative edema;
- minimum loss in sensitivity;
- the absence of physiological disturbances at the level of the scapular belt.

CASE REPORT

Patient M.P, aged 50 years old, was admitted to the Department of Bucomaxillofacial Surgery within Sibiu Clinical County Emergency Hospital with the diagnosis of malignant tumour at the anterior buccal floor, previously operated, with right fixed latero-cervical adenopathy, requiring specialized investigations and treatment.

Objective examination revealed at lymph nodes level, a right latero-cervical adenopathy while all other devices and systems were in normal range.

Figure no. 1. Tumour at the anterior buccal floor



Ultrasound examination of the soft parts revealed in the lateral groove of the tongue straight towards the lateral wall of the pharynx, a mixed picture, in homogeneity, about 1 cm capped by hyperechoic strips of postradioterapy fibrosis. The formation has a radiant disposition towards the laterofaringian spaces. Superior right deep hypoechogenic adenopathy of about 25 mm. Supraclavicular adenopathies of 11 mm.

Treatment

The treatment was surgical, in IOT general anesthesia intervention. After disinfection and cover of the operator field, there was practiced a submandibular right incision, on the edge of the prolonged anterior SCM right muscle, are dissected in anatomical plans the cervical triangles III, IV and V, after MRND technique type III (modified radical neck dissection).

Due to the adhesion of a lymph node notepad to the carotid glomus, the carotid glomus is dissected incomplete.

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 Article received on 09.10.2015 and accepted for publication on
 ACTA MEDICA TRANSILVANICA December 2015;20(4):101-102

CLINICAL ASPECTS

Figure no. 2. Intraoperative appearance



Figure no. 3. Surgical piece



After checking the hemostasis, there was practiced the surgical toilet of the wound, as well as suture in anatomical planes after applying in advance a drainage suction tube, type Redou. The surgeon applied a compressive sterile dressing.

Figures no. 4,5. Modified radical neck dissection type III



The patient was discharged surgically cured, with the following recommendations:

- maintaining a rigorous oral hygiene;
- returning 7 days later, for the suppression of the suture wires;
- returning after three weeks for the histopathological result and for oncological speciality treatment.

DISCUSSIONS

The buccal floor tumours are extremely common among the population, totalling about 20-30% of the cancers localized in the oral cavity.

Malignant tumours of the buccal floor are extremely high lymphophil, with high potential of metastasis at cervical level, as well as at distance. Usually, it affects the lymph node groups of levels I, II, III, IV, V. In the previous locations, lymphatic dissemination is made bilateral, loco-regional ganglionar co-intersection being precocious; about 50 % of patients present submento-submandibular adenopathy and about 20-25% carotid-jugular adenopathy.(5)

With respect to the modified radical neck dissection, some studies suggest that this surgical technique made bilaterally may prevent the lymph nodes recurrence reintervention, but it seems that it would not influence the prognosis in young patients.(6)

The standardization of the cervical extirpation techniques has as its target to maximize the therapeutic results

obtained and to facilitate the reporting thereof. Each patient requires a customized therapy scheme influenced, both by the location of the primary tumoral process and by the stage and location of the metastases in the lymphatic ganglions.

CONCLUSIONS

Modified radical neck dissection was developed and implemented in order to reduce the morbidity of cervical radical neck dissection, which generates a number of postoperative early, local and at distance complications and thus a high percentage of postoperative morbidity.(4)

The malignant tumours in the OMF field, although having a lower prevalence than in other regions, have a high importance due to their development, therefore the early identification and treating in due time may extend the survival rate of the patients with malignant pathologies up to 80 – 90%.

The algorithm of assessing a patient with malignant laterocervical adenopathies involves several stages: anamnesis, clinic examinations of the cervical area, the examination of ENT bodies, indispensable and mandatory in any cervical adenopathy, complementary examinations, such as radiologic and imagistic. In order to establish the positive diagnostic, one may resort to: ganglionar puncture, ganglionar biopsy, extirpation followed by the hystopathological examination, which is the ultimate instrument in providing the certainty diagnostic. It guides the approach of the surgical treatment as well as of the adjuvant one.

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