Sal 06**THE THERAPY OF MALIGNANT SALIVARY GLAND TUMORS WITH FAST NEUTRONS**

H.D. Franke

Surgery is the accepted primary treatment for most malignant salivary gland tumors. Radical surgery, limited by the proximity of vital structures, does not prevent high local recurrence rates. The concept of surgical removal of the tumor and postoperative radiotherapy with megavoltage irradiation (photons and/or fast electrons) for subclinical (microscopic) disease is currently used for therapy of many malignant salivary gland tumors; but high doses are needed for these types of tumor with risk of severe complications in normal tissues. The local control rate is diminishing in treating macroscopic tumors bigger than 3-6 cm with megavoltage therapy, combined with an increasing rate of complications. Under these circumstances therapy with fast neutrons, owing to the high energy transfer (LET), is promising better local effect on macroscopic tumor rests or recurrences. Some authors are reporting high rates of local control (70-80 %) after treatment of macroscopic advanced tumors with fast neutrons. The aim of this paper is to examine own results in treating patients with macroscopic tumors of malignant salivary gland tumors with fast neutrons (DT, 14 MeV), to be compared with results of other centers. We are expecting, even in very advanced tumors, better local effects concerning cure or palliation than with megavoltage therapy. Other important advantages of our DT-Neutrons are that these results are achieved without severe complications and that surgery after preoperative irradiation is not prevented. Strahlentherapie-Abteilung des Universitäts-Krankenhauses Eppendorf, Martinistraße 52, D-2000 Hamburg 20

Sal 07**SPACE CONSUMING MASSES IN THE PAROTID GLAND, EVALUATION WITH ULTRASOUND.**

W. Wagner, H.D. Böttcher, G. Siepmann

82 patients with palpable space-consuming masses in the parotid region had been subjected to pretherapeutic sonography. Sonography was performed with a 5 Mega-Hertz transducer, using a Picker LS 5000 instrument. The parotid gland is demonstrated by sonography in transversal section between the M. masseter and the M. sternocleidomastoideus, smoothly delineated as a flat, homogenous, echo-rich structure. In chronic parotitis, sonography reveals inhomogenous glandular echo structures of somewhat coarser pattern, while the organ itself is but slightly enlarged. A parotid abscess shows some areas of indistinct contour and polygonous configuration with poor reflex patterns at the margin and no echo marks in the center. The plain cyst appears round, well delineated, echo free, showing a typical dorsal enhancement of sound. The Warthin tumor shows both echo free zones and others with homogenous echo patterns, reflecting the proportion of its papillomatous, solid and cystic components. Pleomorphic adenoma is readily differentiated from these lesions, but detailed diagnosis of its subentities is not always possible due to a lack of morphologic distinction from benign intraglandular lymph node enhancement. Lymph nodes with intraglandular enlargement show the same echo texture, and it is only their multiplicity that helps to distinguish them from pleomorphic adenomas. The latter has smooth contours and a basically echo-free structure, interspersed with some fine, homogenous internal echos. Genuine malignancy could be recognized in the tumors of our collective, but a statistical evaluation of benign and malignant tumors is not possible because of the small number of obviously malignant cases. The criteria of malignancy are seen in an indistinct contour and heterogeneous echo pattern within a generally echo-depleted basic structure.

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Sal 08**ARE ULTRASOUND AND SIALOGRAPHY COMPLEMENTARY IMAGING TECHNIQUES IN EVALUATING TUMOURS OF THE SALIVARY GLANDS?**

K. Bohndorf, F. Zanella, G. Cornelius, H. Luckhaupt, D. Beyer

In addition to the clinical evaluation ultrasound has developed to be the primary imaging technique in the diagnostic work-up of masses in the salivary glands. It has replaced in parts sialography. To evaluate the role of ultrasound and sialography, 53 patients with histologically verified tumours of the salivary glands, in whom both modalities had been employed, were reviewed retrospectively. The aim of the study was to find out if sialography gives additional information in detecting and localizing tumours in the salivary glands. Ultrasound had been performed primarily. Sialography had been carried out in knowledge of the sonographic findings. RESULTS:

Table 1: Imaging of Salivary Gland Tumours (n=53)

	US	US and Sialography
Detection	52	52
Localisation		
-correct (intraglandular)	31	34
-false (extraglandular)	5	3
-uncertain	16	15

CONCLUSION

1) Ultrasound has a high accuracy in detecting masses in the region of the salivary glands. 2) Ultrasound is a painless, fast and cheap method which should be carried out primarily in addition to the clinical investigation. 3) Are clinical and sonographic findings consistent with the diagnosis of a tumorous process in the salivary glands in most cases sialography gives no further information and should not be performed routinely. 4) The correct intra- or extraglandular localisation of tumorous masses in the region of the salivary glands is often difficult as well with sonography as with sialography. This is especially true for masses in the inferior part of the parotid gland. In rare instances sialography is of additional help in distinguishing intra- from extraglandular tumours in the region of the salivary glands.

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Sal 09**NEW DIAGNOSTIC IMAGING METHODS IN TUMOURS OF THE SALIVARY GLANDS**

K. Mees, Th. Vogl

In a prospective study the advantages of imaging techniques (CT, MRI) in the diagnosis of tumours of the salivary glands of the head and neck have been investigated.

An important advantage is the fine and detailed representation of the tumours which is made possible by an enhancement of contrast and by the improved spatial imaging based on the frontal and sagittal projection plane.

Besides it will be possible to obtain more detailed information on the depth of infiltration of local lymph node tumours, e. g. malignant lymphoma, metastases.

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