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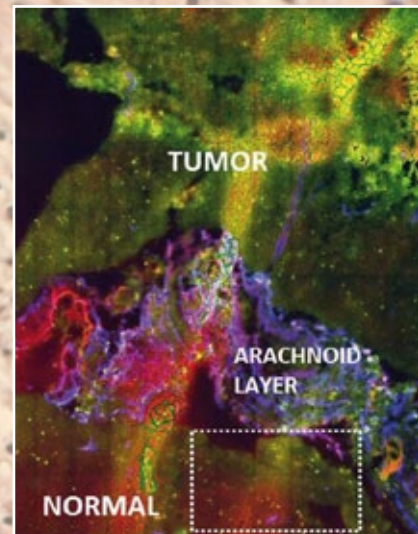
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Dysphagia in Glioblastoma

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Dysphagia in Glioblastoma

Marieke Kamphuis, Hanneke Zwinkels

■ Introduction

Patients with a malignant brain tumour often experience signs of dysphagia. These so-called swallowing problems may cause aspiration, pneumonia, dehydration, malnutrition, asphyxia, and difficulty in medication intake. Occurrence of dysphagia in glioma patients is described with a variable frequency, ranging from 26–85 % [1, 2]. Oberndorfer et al [3] report an increased incidence of swallowing problems in the 10 weeks before death. Patients are often not aware of the fact that they suffer from dysphagia [4], and therapeutic interventions are seldom applied [3].

At the Medical Centre Haaglanden, speech and language therapists are consulted for patients with brain tumours who are admitted to the hospital and who have difficulties speaking and swallowing. A retrospective investigation of the files of 56 patients showed that dysphagia was diagnosed in 55 % of patients. Brain tumours located in the right hemisphere (n = 15) were all associated with dysphagia, those located in the left hemisphere (n = 39) were responsible for dysphagia in 30 % of patients. Two patients, of whom one had a bi-frontal tumour and one a pontine glioma, both suffered from dysphagia.

During the end-of-life phase, interventions for dysphagia are often difficult. In general, swallowing problems occur mostly while drinking. It is advised to use thickening powder (Nutrilis, Resource Thicken Up) in order to prevent patients from choking. Patients often experience the use of thickening powder as less tasteful, but it might take away the risk of developing aspiration pneumonia. Finding the right balance between the amount of thickening powder and tasteful food is a challenge. Slightly thicker liquids like chocolate milk, butter milk, and fruit juice can often be used without thickening powder. Pudding, yoghurts, soft curd cheese, and apple sauce are often easier to swallow. Mixed consistencies such as vermicelli-soup and yoghurt with cereals are more difficult to swallow, because the oral musculature has to adapt to different consistencies with a different speed of movement. Medication intake is more simple when crunched and presented with thickened liquids, but this is not always allowed. Adjustment of oral medication into powder, liquid, or injection could offer a solution.

■ Case Study: Dysphagia in a Glioblastoma Patient

A 64-year-old male patient was diagnosed with a glioblastoma multiforme in his right frontal-temporal lobe for which he underwent resection and concomitant radiotherapy and temozolomide.

The tumour was diagnosed after 4 months of changed senses of smell, less sensibility and tingling of the left side of his body. Concomitant treatment with radiotherapy and chemotherapy was discontinued because of a deterioration of his clinical condition. One year after the first signs and symptoms the patient died.

First contact between the speech therapist and the patient took place shortly after tumour resection. Post-operatively, the patient suffered from left-sided hemiparalysis. Speaking was tiresome but when articulating consciously, he could make himself understood. There was no problem with swallowing but tongue movements were asymmetric. Anticipating future problems, the speech therapist gave advice and education on swallowing.

Two months later the patient was admitted to the hospital because of neurological deterioration during chemoradiation. Besides an asymmetric tongue, there was a paralysis of the facial nerve and weakened articulation, altogether resulting in choking on drinks. To avoid choking, we advised to use thickening powder. Apart from thickening powder a normal diet was advised. During hospitalisation, swallowing was observed several times, leading to adjustments of the amount of thickening powder, resulting in safer and more tasteful drinking. It was also noticed that the patient was taking huge gulps. When advised to take smaller sips, the patient complained less frequently of choking.

Before the patient was discharged from hospital to go home, his spouse informed the speech therapist that she was afraid her husband would choke and regretted the lack of support from the medical team. Supportive educational intervention by giving information to the spouse was provided which she greatly appreciated.

■ Conditions for Safe Swallowing

The patient has to be in a stable upright position, preferably in a chair at the table or otherwise with good support in bed.

Take time for consuming food and drinks, offer/take small sips or bites at a slow pace. Wait until the amount has been swallowed before offering the next sip or bite.

Help the patient concentrate on swallowing and do not speak during eating or drinking. This could decrease the risk of aspiration by inhaling during swallowing.

Glioma patients often have delayed oral reflexes that cause choking. Use a spout cup appropriately. Do not tilt the head backwards too far. This causes a rapid movement of the liquid

to the throat and as a result requires a faster swallowing reflex. A straw is often positioned at the back of the mouth which causes delayed innervation of the swallowing reflex. It is better to position the straw on the lips.

■ Choking

Choking is expressed by coughing and gasping, a veiled voice, tears, or flushing. It is important to have the patient cough independently, as long as necessary to remove the choked substance from the trachea. It is advised not to hit or tap on the back of the patient because this would interrupt the natural rhythm and power of cough. Wait until the patient has stopped coughing before offering the next sip. If necessary, the Heimlich manoeuvre can be applied or the throat can be sucked out.

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