

ceptives or with smoking. Some data also suggest that migraine with aura is associated with an increased incidence of white-matter hyperintensities in the general population. In contrast, migraine attacks appear unlikely to be the direct cause of cerebral ischemic lesions. It is worth noting that migrainous infarctions are extremely rare. The link between migraine with aura and stroke may be due to common factors between these two conditions. Recent findings concerning the pathophysiology of migraine suggest that the association between migraine and stroke may have different sources. Several components involved in the maintenance of ionic homeostasis or in the functioning of the neurovascular unit at the cortical level may play a key role in the relationships between migraine and cerebrovascular disorders. The different facets of these complex relationships will be analyzed and discussed.

Dor pós AVC

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A dor no contexto clínico pós AVC é uma circunstância frequente, embora nem sempre reconhecível. Trata-se de uma circunstância de difícil avaliação e valorização, dados os condicionamentos do quadro clínico, nomeadamente nos casos de perturbação de comunicação. Pressupõe uma dificuldade acrescida na sua abordagem etiológica e terapêutica e com prejuízo marcado na qualidade de vida dos doentes e cuidadores.

Neste âmbito convém distinguir causas directamente relacionadas com o AVC, causas sequelares indirectas e causas não relacionadas com o AVC, que também poderão fazer parte do potencial quadro algóico existente.

Nas causas directamente relacionadas com o AVC, a cefaleia na fase aguda e o ombro doloroso na fase crónica, são os quadros algóicos mais frequentes. Importa também reconhecer a dor central pós AVC, que embora de incidência discreta nas diferentes séries de estudo, implica quase sempre uma abordagem multiprofissional e com resultados terapêuticos nem sempre eficazes, pelo que se torna um verdadeiro desafio terapêutico.

A dor músculo-esquelética é também usual em doentes com patologia vascular cerebral, quase sempre como consequência indirecta de sequelas de AVC e associada a alterações biomecânicas ou de sobrecarga músculo-tendinosa.

Dentro das condições dolorosas particulares após o AVC, destacam-se o ombro doloroso do hemiplégico que pode surgir em diferentes contextos clínicos e afectando até cerca de 70% dos doentes no primeiro ano pós-AVC. Pode persistir durante anos e tornar-se refractário ao tratamento, sendo um factor limitante da qualidade de vida e do programa de reabilitação do doente com AVC. É uma condição multifactorial e não dependente apenas de alterações biomecânicas. Tem factores preditivos na sua génese e a sua prevenção é primordial.

O síndrome doloroso regional complexo é outra das condições a ter em linha de conta, podendo afectar 10 a 15% dos doentes, nomeadamente com atingimento do membro superior. Tem uma fisiopatologia mal esclarecida, sendo a imobilidade o factor perpetuador da resposta inflamatória e da cronificação da dor. Pressupõe uma abordagem eminentemente clínica e uma concepção terapêutica multifacetada, de forma a ser eficaz do ponto de vista analgésico e sobretudo funcional.

Decompression craniectomy in malignant MCA Stroke

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Total or subtotal middle cerebral artery (MCA) infarction, including the basal ganglia, is a life threatening event leading to severe brain swelling between the second and fifth day after acute stroke. Mass effect causes further destruction of formerly healthy brain tissue and leads to significant brain shift. This is responsible for the rapid and severe neurological impairment seen in such patients. In prospective series the fatality rate of these patients was approximately 80% despite maximal medical treatment. For these patients the term "malignant infarct" was coined. Especially younger patients suffer from exactly this type of infarction, therefore, strong efforts were made to find the optimal treatment solution in the last decades.

Besides improved conservative therapy comprising the attempt of re-canalisation of vessels, and an advanced intensive care regime including anti-edema- and ICP therapy, optimization of cerebral perfusion pressure and hypothermia, additionally, outcome of patients remains frustrating. Despite the evidence being weak, **decompressive surgery** may represent one of the most promising treatment options. The rationale of removing a part of the neurocranium is to create space for the expanding brain and to relieve pressure from the midline structures. Ideally, this normalizes intracranial pressure and therefore improves cerebral perfusion pressure and solves jeopardized but still healthy brain tissue.

The surgical technique commonly used is a hemicraniectomy. Size of the bone flap should reach a diameter of at least 14x10 cm and the dura should be opened and enlarged.

Although decompressive surgery often represents a life-saving measure, controversy still exists concerning an acceptable outcome of the patients.

For a long time, only non-randomized, retrospective case series employing heterogeneous inclusion criteria had suggested that decompression surgery might be beneficial in the therapy of space occupying MCA infarction, especially emphasizing mortality rate. Recently, Vahedi et al. (Lancet Neurology 2007) published results of a pooled analysis of three prospective randomized controlled trials on early decompression surgery (DECIMAL; DESTINY I; HAMLET). In total, 93 patients were included randomized to surgery (n=51) or maximal medical conservative treatment (n=42). Primary outcome was quantified in a modified Rankin score (mRS) at 1 year dichotomized between favorable (0-4) and non-favorable (5 and death) outcome. Secondary outcome measure was the mortality rate after 1 year. Due to treatment, patients differed significantly after 1 year: patients randomized to surgery had a mRS ≤ 4 (75% vs. 24%, $p < 0.0001$) and mRS ≤ 3 (43% vs. 21%, $p < 0.014$). Likewise, mortality rate differs significantly between these two groups (78% vs. 29%, $p < 0.0001$) favoring surgery. The number needed to treat was two in patients with mRS ≤ 4 , 4 in patients with mRS ≤ 3 and 2 for mortality, regardless of the neurological outcome. Therefore, authors concluded that not only mortality rate could be reduced, but also neurological function improved performing decompressive surgery within 48 hours after stroke. Moreover, information concerning quali-