

Frontal and central oscillatory changes related to different aspects of the motor process: a study in go/no-go paradigms

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We studied alpha and beta EEG oscillatory changes in healthy volunteers during two different auditory go/no-go paradigms, in order to investigate their relationship with different components of the motor process. In the first paradigm (S2-centered), the initial tone (S1) was constant (warning), and the second tone (S2) indicated the subject whether to move or not. In the second paradigm (S1-centered), S1 indicated whether to move or not, while S2 just indicated the timing of the movement. A medial frontal beta energy increase was found in all conditions after the stimulus that forces the subject to decide whether to move or not (S1 or S2 depending on the paradigm).

In both go conditions, a central alpha and beta energy decrease began after the go decision, reaching minimum values during the movement; it was followed by a beta post-movement increase, limited to the central contralateral area. In the no-go conditions, a marked fronto-central beta synchronization appeared after the decision not to move. In conclusion, our study was able to dissociate the beta oscillatory changes related to movement preparation and execution (central decrease/increase) from those associated with decision-making (medial frontal increase) and motor inhibition (fronto-central increase). (*Exp Brain Res* 2004; 159: 14-22).

Olerance of a cluster schedule with a house dust mite extract quantified in mass units: multicentre study.

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The standardisation of allergenic extracts in micrograms of the major allergen has encouraged the search for new treatment schedules, with the purpose of shortening the number of visits and doses required to reach the maintenance dose without eliciting a greater risk of adverse reactions for the patients. With this objective, a prospective multicentre pharmacovigilance study was designed that included 200 patient with allergic rhinoconjunctivitis and/or allergic asthma sensitised to mites (*Dermatophagoides pteronyssinus* and/or *farinae*). The dose increment period was carried out using a cluster schedule, where the optimal dose was reached after 4 visits, administering two doses in each visit. The duration of the study was 5 months and a total of 1902 doses were

administered. At the end of the trial, 31 adverse reactions in 23 patients were recorded. Six of these were systemic (0.3% of administered doses) recorded in 6 patients (3% of the sample). One was an immediate reaction (grade 1) and delayed (4 mild and 1 moderate). Two were asthmatic exacerbations, 2 cutaneous reactions, 1 rhinitis and 1 an unspecific symptom (not IgE-mediated). Two appeared upon administration of the first vial and the remaining 4 after administration of the third cluster. Therefore, the schedule tested presents an adequate tolerance profile, suggesting savings (compared to the conventional schedule of 13 doses per patient) of 1800 visits and 1000 treatment doses in the whole study. (*J Investig Allergol Clin Immunol* 2004; 14: 193-197).

Síndrome hepatopulmonar: relación con el grado de disfunción hepática y el trastorno hemodinámico de la cirrosis hepática

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Fundamento y objetivo. El síndrome hepatopulmonar (SHP), que cursa con un gradiente alvéolo-arterial de oxígeno incrementado y, en fases avanzadas, con hipoxemia, es el resultado de la vasodilatación pulmonar. En la cirrosis hepática se ha demostrado la presencia de vasodilatación fundamentalmente esplácnica, pero también en otras zonas. Nuestro principal objetivo fue conocer el estado hemodinámico, la función renal y el estado de algunos sistemas humorales en pacientes diagnosticados de SHP.

Pacientes y métodos. Analizamos consecutivamente a 32 pacientes cirróticos divididos en 2 grupos, uno de 18 pacientes cirróticos con intercambio gaseoso normal (C-IGN), y otro de 14 pacientes diagnosticados de SHP por ecocardiografía transtorácica de contraste y/o gammagrafía pulmonar-cerebral con macroagregados de albúmina, en régimen de hospitalización, sin fármacos de acción cardiovascular durante los 4 días previos, reposo en cama, abstinencia de alcohol y tabaco y dieta de 50 mEq de sodio.

Resultados. Los pacientes del grupo SHP se caracterizaban por un índice de Child-Pugh más avanzado, presencia de acropaquias y arañas vasculares. Presentaban mayor grado de hipoxemia en sedestación, mayor hipocapnia y menores valores de difusión (TLCO). Asimismo, mostraban un estado circulatorio hiperdinámico caracterizado por menor presión arterial, mayor índice cardíaco, menores resistencias vasculares y mayor flujo femoral, con menores aclaramiento de creatinina, excreción de Na urinario, volumen urinario/24 h e hipervolemia, acompañado de mayor activación del eje renina-angiotensina-aldosterona y mayor excreción urinaria de nitritos y nitratos.

Conclusiones. La vasodilatación pulmonar que explica el SHP es parte de la vasodilatación generalizada que ocurre en la cirrosis hepática, que tiene relación con el grado de disfunción hepática medido por la clasificación de Child-Pugh. La mayor activación del sistema renina-aldosterona y el aumento del volumen plasmático expresan un grado más alto de subllenado arterial causado por un incremento en la producción de óxido nítrico. (*Med Clin (Barc)* 2004; 123: 72-725).

Intradural disc herniation and epidural gas: something more than a casual association?

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Study design. The case of a patient with an intradural disc herniation associated with gas in the spinal canal is presented.

Objective. To alert spine surgeons to this potential association.

Summary of background data. This association was described previously in five patients, a fact that

seems surprising given the relative rarity of both intraspinal gas and intradural herniations.

Methods. The case is presented of a female patient with lumbosciatic pain who developed an incomplete cauda equina syndrome. An asymmetric discopathy of the L2-L3 space and a gas bubble with disc material within the spinal canal was noticed in the radiologic

explorations. The literature and the authors' experience are reviewed with the aim of confirming the frequency of intradural herniation in association with gas in the spinal canal.

Results. A laminectomy of the involved space was performed followed by direct intradural examination, which revealed a disc fragment that was excised. An instrumented L2-L3 arthrodesis was performed. Postoperative evolution was satisfactory. To date, the authors have found this association in 2% of the patients with intraspinal gas.

Conclusion. The potential presence of an intradural disc herniation must always be considered when performing an open discectomy on a patient whose CT scan study shows the presence of epidural gas. This association is particularly striking given the relative rarity of intradural herniations and intraspinal gas. In the event that no clear disc herniation was found, an intradural examination may be indicated to justify clinical signs and symptoms or previous radiologic studies. (*Spine* 2004; 29: E463-E467).

Concomitant boost radiation and concurrent cisplatin for advanced head and neck carcinomas. Preliminary results of a phase II, single-institutional trial

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Introduction. This study aims to assess the effectiveness and toxicity of boost radiotherapy concomitant and concurrent cisplatin for patients with locally-advanced head and neck cancer (LAHNC).

Material and methods. There were 30 patients included in a prospective, phase II single-institution trial and of whom, 29 were at AJCC stage IV and 1 at stage III. Treatment consisted of radiotherapy-acceleration fractionation with concomitant boost, 72 Gy, and 2 cycles of concomitant cisplatin (20 mg/m²/day continuous infusion; days 1-5 and 29-33). Amifostine, (i.v. 200 mg/m²) was administered to 26 prior to the first fraction of radiotherapy. Endpoints of the study were quality-of-life (QL), overall survival, and local control of disease.

Results. Complete response (CR) was achieved in 23 patients (77%), 2 patients had partial response (PR) (7%), 4 had no response (13%), and 1 was not evaluated for response. The 2-year overall survival and loco-regional control were 60% and 56%, respectively. Main toxicity was grade 3 or 4 mucositis in 93% of the patients. QL scores (questionnaire QLQ-C30; version 3.0) and the HN cancer module QLQ-HN35) showed a worsening in areas related to treatment e.g. dry mouth, problems stretching the mouth, and sticky saliva.

Conclusions. This combination modality is active, but toxic, in the treatment for LAHNC. Concomitant boost radiotherapy is probably, not the best radiotherapy schema for combining with chemotherapy in LAHNC. (*Clin Transl Oncol* 2005; 7: 60-65).