Case study

Nerve damage: catastrophic complications that need to be vigilant in the clinical application of triamcinolone acetonide, two case reports

Abstract

In this paper, we reported two cases of severe neurological complications caused by triamcinolone acetonide. One case was severe hearing loss on the same side after triamcinolone acetonide was injected around the ear to treat scars, and the other case was severe complications of lower limb paralysis after triamcinolone acetonide was injected into the spinal canal. In clinical practice, we should pay attention to the disastrous neurological complications caused by triamcinolone acetonide hydrochloride, and take relevant preventive and coping measures.

Keyword: Neurological Complications; Triamcinolone Acetonide

Introduction

Triamcinolone acetonide, a long-acting adrenocortical hormone, is commonly used in the treatment of rheumatoid arthritis, allergic dermatitis, skin scars and chronic pain in the joint cavity or epidural space injection (Song,2019; Van Boxem,2019). However, we should be alert to the disastrous neurological complications caused by triamcinolone acetonide.

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Case presentation

Recently, two cases of triamcinolone acetonide related catastrophic neurological complications occurred in our hospital. The first case was a 18-year-old female, ASA grade I, without any basic disease, in general good condition. Because of the scar of the earlobe, the cosmetic physician injected triamcinolone acetonide and lidocaine injection into the scar. The patient immediately developed local large-area ecchymosis, and the ipsilateral hearing was severely damaged, resulting in nausea, vomiting and vertigo. After 2 months of treatment, the patient's nausea, vomiting and vertigo improved, but the hearing damage did not improve. The second patient was a 55-year -old female. Due to postherpetic neuralgia, the left T10, T11 and T12 nerve roots were blocked under the guidance of X-ray. The injection drug was triamcinolone acetonide combined with lidocaine. The operation was smooth. Two hours after the injection of the drug, the patient developed paraplegia of both lower limbs. After one month of treatment, it still did not improve.

Discussion

The above two cases of catastrophic neurological complications are speculated to be related to the complications of triamcinolone acetonide. Triamcinolone acetonide is a suspension, insoluble in water, with a large number of particles gathering, and the largest particle is greater than 500μm. It has been reported that the medium-sized particles of adrenocortical hormone with a diameter of 51-1000μm can easily block the blood vessels, especially the anterior spinal artery (Dietrich, 2015;Mehta,2017). Although intratympanic injection of triamcinolone acetonidecan be used to treat

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hearing impairment, severe hearing impairment caused by topical injection into the earlobe is very rare (Dahm, 2019). The serious hearing impairment and paraplegia of lower limbs caused by triamcinolone acetonide in the above two cases are likely to block the capillaries of the inner ear or the blood vessels of the spinal cord with triamcinolone acetonide granules, resulting in serious dysfunction of the inner ear and spinal cord. In addition, the preservative of triamcinolone acetonide contains benzyl alcohol, which may have certain neurotoxicity to the adjuvant itself and cause corresponding neuroinflammatory reaction.

Therefore, in view of the disastrous consequences of triamcinolone acetonide, we should be alert to its serious neurological complications when using triamcinolone acetonide clinically. Try to avoid using it in some parts with abundant blood supply and important nerve function. During use, it should be closely observed, relevant complications should be treated as soon as possible, and irreversible nerve complications should be avoided.

CONCLUSION ????????WHERE IS THE CONCLUSION?????

Reference

Dahm, V., Nieratschker, M., Riss, D., Kaider, A., Auinger, A., Honeder, C., &Arnoldner, C. (2019). Intratympanic Triamcinolone Acetonide as Treatment Option for Idiopathic Sudden Sensorineural Hearing Loss. Otology &neurotology : official publication of the American Otological Society, American Neurotology Society [and] European Academy of Otology and Neurotology, 40(6), 720–727.

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WHERE IS THE CONCLUSION?????

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https://doi.org/10.1097/MAO.0000000000002283

Dietrich, T. J., Sutter, R., Froehlich, J. M., &Pfirrmann, C. W. (2015). Particulate versus non-particulate steroids for lumbar transforaminal or interlaminar epidural steroid injections: an update. Skeletal radiology, 44(2), 149–155. https://doi.org/10.1007/s00256-014-2048-6

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For Published paper:

1. Hilly M, Adams ML, Nelson SC. A study of digit fusion in the mouse embryo. ClinExp Allergy. 2002;32(4):489-98.

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