



## PIC QUESTION OF THE WEEK: 1/30/06

Q: What medications are commonly associated with pseudotumor cerebri?

A: Pseudotumor cerebri (PTC), also known as idiopathic intracranial hypertension, is a reversible process affecting the brain that mimics a tumor. PTC is an idiopathic condition since there is no evidence of tumor, infection, blocked drainage of the fluid surrounding the brain, or any other cause. It is most likely due to elevated intracranial pressure (ICP) caused by the accumulation or poor absorption of cerebrospinal fluid (CSF) in the subarachnoid space. Symptoms/signs include headache (~90%), nausea, vomiting, blurred vision, increased head size, and bulging anterior fontanelle (in newborn when the cranial sutures are not yet closed). Papilledema (edema of the optic disc) is almost always associated with PTC and may result in irreversible loss of vision. In order to rule out the presence of malignancy, a CT scan or MRI is routinely conducted. Lumbar puncture usually confirms elevated intracranial pressure. There are many factors that increase a patient's risk for developing PTC. This condition is more common in women, especially those who are pre-menopausal and obese. It is rare in infants. Risk factors also include hypervitaminosis A, Cushing's disease, anemia, sleep apnea, hypoparathyroidism, hypothyroidism, chronic renal failure, and use of some medications. The tetracyclines, NSAIDs, and vitamin A analogs are some of the most common causes of drug-induced PTC. Other agents reported to produce the condition include antimicrobials (e.g. nitrofurantoin, sulfonamides, some fluoroquinolones), contraceptives (oral and implant), corticosteroids (often during withdrawal), thyroid hormones, anticonvulsants, cyclosporine, danazol, etc. There is no established mechanism for drug-induced PTC, although there is some suggestion these agents may decrease CSF absorption in susceptible individuals. Symptoms typically develop slowly over weeks or months (often more rapidly with tetracyclines) of initiating therapy and generally resolve after discontinuing the medication. It must be noted that visual loss may be permanent. Treatment options for PTC consist of management of the underlying disease, weight loss, insertion of a shunt, fluid or salt restriction, and hyperosmotic drugs (particularly diuretics). Acetazolamide has been used effectively in the treatment of some types of drug-induced PTC. To prevent further deterioration of vision, an incision of the optic nerve sheath may be required to relieve papilledema. Follow-up MRI or CT scanning as well as ophthalmologic examination are required to exclude hidden malignancy and monitor for changes in vision.

### References:

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