Answer to Medical Quiz - 1

Answer

1. Five differentials of the skin lesion:
   Secondary syphilis, psoriasis, tinea corporis (dermatophytosis), pityriasis rosea, drug eruption, HIV seroconversion
2. Name of coalescing lesions forming plaque in moist areas: Condylomatalata
3. Non-specific test:
   VDRL, RPR
   Specific test:
   Treponemal antigen-based enzyme immunoassay (EIA) for IgG and IgM
   Treponema pallidum haemagglutination assay (TPHA)
   T. Pallidum particle agglutination assay (TPPA)
   Fluorescent treponemal antibody-absorbed (FTA-ABS) test
4. Treatment of the disease:
   A single dose of 2.4 megaunits of long-acting intramuscular benzathine benzylpenicillin
   For early syphilis (< 2 years duration) or oral doxycycline for those who are allergic to penicillin

Discussion:

In addition to the reported sexual exposure, the patient provided a history of a painless inguinal swelling and a non-tender penile ulcer, clinically suggestive of primary syphilis. He did not seek medical attention during that episode, and the lesion resolved spontaneously. On current physical examination, there was no evidence of local or generalized lymphadenopathy. No residual chancre or signs of atrophic ulceration or scarring could be identified. Routine laboratory investigations were within normal limits, except for reactive Venereal Disease Research Laboratory (VDRL) and Treponema pallidum hemagglutination assay (TPHA) tests. Based on the serological diagnosis, he was managed with two doses of benzathine penicillin G (1.2 million units each), administered intramuscularly in both gluteal muscles.

Syphilis is a sexually and vertically transmitted infectious disease caused by Treponema pallidum. The global burden of syphilis has shown an upward trend, with estimated cases of 30.9 million in 1990 rising to 49.7 million in 2023, disproportionately affecting populations in sub-Saharan Africa.[1] Although national prevalence data for Bangladesh are limited, a study among resident female sex workers reported a syphilis prevalence of 4.6%, while another study demonstrated that sexually transmitted infections (STIs) were present in 43.6% of female sex workers, with syphilis being the most prevalent infection (38.2%).[2,3] Social stigma, fear of discrimination, and lack of awareness often deter patients from seeking timely medical care. Furthermore, inadequate exploration of high-risk sexual behaviour and incomplete sexual history-taking may lead to missed or delayed diagnosis.

Syphilis is often referred to as “the great imitator” due to its diverse clinical manifestations, and Sir William Osler famously stated, “Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you”.[4] With the resurgence of syphilis globally, clinicians must maintain a high index of suspicion and consider it as a differential diagnosis in appropriate clinical contexts.

References

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Answer to Medical Quiz - 2

Ans 1 :

a) Magnetic resonance imaging showed a large cystic lesion in the left frontal lobe.

b) The cyst was homogeneously hypointense on T1- and hyperintense on T2-weighted and FLAIR.

c) DWI shows restriction with hyperintensity and GRE shows nothing significant changes

Ans 2. Differentials are:

a) Arachnoid Cysts

b) Cystic Meningiomas(rare 2-3%)

c) Epidermoid or Dermoid Cysts (Rare)

d) Infectious Cysts

e) Neoplastic Cysts: (e.g., ganglioglioma, pilocytic astrocytoma) or metastatic cancer.

Ans 3. Arachnoid Cyst at the left frontal region

Ans 4. MRI of brain with contrast and MRS

Ans 5. Left frontal craniotomy.

OVERVIEW:

Arachnoid cysts (ACs) are benign tumors with cerebrospinal fluid (CSF)-like contents. They account for 1% of all intracranial masses in adults. Symptoms are mostly caused by compression of nearby structures, and symptoms vary depending on the location of the cysts.[1] Most arachnoid cysts are supratentorial. 50 to 60% are located in the middle cranial fossa. Other places include the suprasellar cistern and posterior fossa (10%), with the majority occurring in the cerebellopontine angle cistern[2]. Frontal convexity arachnoid cyst lesions are uncommon, and there is limited direct documentation in the literature. Arachnoid cysts have a wide range of clinical symptoms that are frequently nonspecific.[3]

The initial appearance of symptoms and signs is usually caused by three basic factors: cortical irritation, cerebral parenchymal compression, and CSF circulation restriction. The most common symptoms include headaches, weakness, seizures, hydrocephalus, cognitive impairment, and vision loss.[3,4]

According to Erman et al, the most prevalent clinical characteristics are epileptic seizures and headaches [2]. A preoperative diagnosis of an AC can be easily made with CT or MRI. On CT, arachnoid cysts appear as extraaxial cysts with CSF density and little contrast enhancement. MRI signals appear hypointense on T1-weighted sequences and hyperintense on T2-weighted sequences, with signal characteristics comparable to CSF across all sequences. Gadolinium was administered intravenously, but neither the cyst contents nor the cyst wall improved. MRI is also sufficient to determine the compression of cysts on cerebral structures 5. Surgical surgery can effectively lessen or eradicate symptoms caused by cerebral arachnoid cysts. In general, surgical treatment yields positive results.[6]

References:

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