Q1 A 7-year-old child who has never had a full year with a dry bed. Organic cause ruled out. The child is very worried about his condition. What is best initial management?

(A) Pharmacotherapy with Imipramine
(B) Psychodynamic Psychotherapy
(C) Motivational therapy
(D) Bell-and-pad conditioning

Ans: (C). Motivational therapy

Explanation: Diagnosis is Nocturnal enuresis . (Reference: Nelson 20 edition page 2585)

-Nocturnal enuresis refers to the occurrence of involuntary voiding at night after 5 years. ---Enuresis may be primary (75-90%, urinary control never achieved), or secondary (10- 25% , child was dry for few months and then enuresis developed)

Monosymptomatic enuresis : is more common

Non - monosymptomatic enuresis , less common, associated symptoms include associated urgency, hesistancy, frequency and day time incontinence

CAUSES

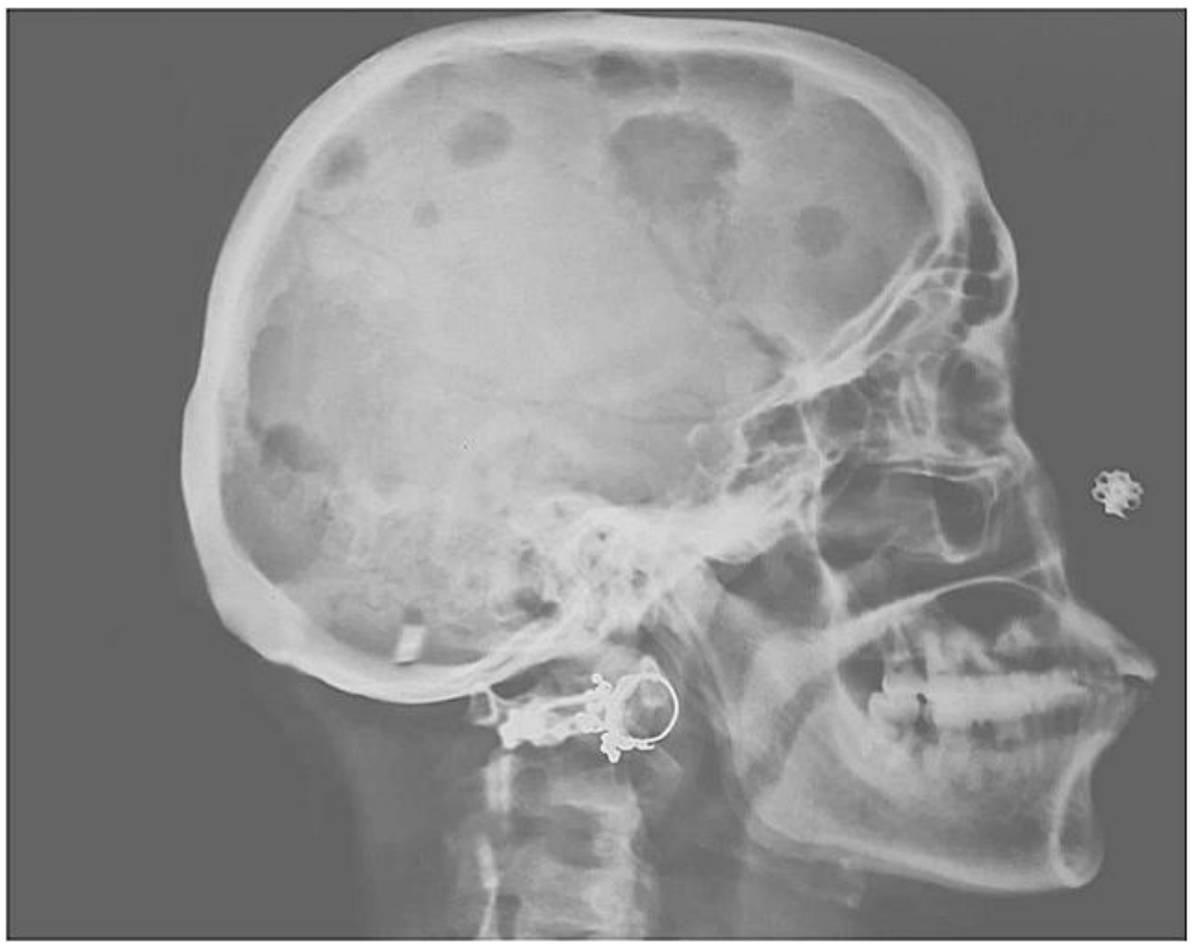
a. Delayed maturation of the cortical mechanisms that allow voluntary control of the micturition reflex
b. Defective sleep arousal
c. Genetic factors
d. Constipation
e. Sleep disorders
f. Sleep disordered breathing

Clinical manifestations: and diagnosis

a. Careful history
b. Detailed examination for neurological and spinal abnormalities
c. Palpation of abdomen to evaluate for chronically distended bladder
d. Urine sample should be obtained after an overnight fasting and should be evaluated for specific gravity, osmolality and absence of glycosuria should be confirmed.

Treatment :

a. The best approach to treatment is to reassure the child and parents that the condition is self limited and avoid punitive measures that can affect the child' s psychologic development adversely
b. Fluid intake should be restricted to 2 oz after 6- 7 PM.
c. Parents should be certain that the child voids at bedtime
d. Avoiding extraneous sugar and caffeine after 4 PM is also benfecial
e. If the child snores at night, and adenoids are enlarged, a referral to otolaryngologist should be considered
f. Active treatment is avoided in children < 6 years
g. Simplest initial measure is motivational therapy
h. Conditioning therapy involves use of a loud auditory or vibratory alarm attached to a moisture sensor in the undergarment. The alarm sounds when voiding occurs and is intended to awaken the child and alert them to void.
i. Pharmacologic therapy : is the second line of therapy and is not curative.One form of treatment is Desmopressin acetate , a synthetic analogue of ADH that reduces urine production overnight.For therapy resistant enuresis or children with overactive bladder , anticholinergic therapy is indicated. A third line treatment is imipramine, which is TCA.



Q2 A 5 year old child presented with history of fever X 1 month. He also complained of severe seborrheic dermatitis.His baseline blood investigations were sent and X ray skull revealed multiple lytic areas. His management would include which of the following?

(A) Rituximab
(B) Vinblastine- prednisolone
(C) Vincristine and asparaginase
(D) Ctarabine and daunorubicin

Ans: (B) Vinblastine -prednisolone

Explanation: Differential diagnosis of lytic lesions in skull in paediatricpopulation include:

I. Langherhans cell histiocytosis (LCH)
II. Leukemia
III. Lymphoma
IV. Sarcoma metastasis

Among the above mentioned D/D, Skeletal system is the most common site of involvement in LCH., seen in 80- 100 % of patients. Flat bones like skull and axial skeleton are preferentially involved over long bones while hands and feet are almost never involved. The usual presentation is a lytic bony lesion with associated soft tissue swelling, which may be asymptomatic or painful. Lymphadenopathy is also commonly seen. Tretment options for LCH

include:Vinblastine/prednisolene/ 6- mercaptopurine . Cladribine and cytarabine can effectively cross blood brain barrier and can be used to treat CNS- LCH.

Q3 Drug of choice for absence seizures
(A) Ethosuximide
(B) Gabapentin
(C) Valproic acid
(D) Carbamazepine

Ans: (A). Ethuximide

Explanation: Nelson 20 edition page2840
Drug therapy should be based on type of seizure and epilepsy syndrome:
I. Focal seizure and epilepsies: Carbamazepine
II. Absence seizure: Ethosuximide
III. Juvenilemyoclonic epilepsy: Valproate and lamotrigine
IV. Lennox gestaaut syndrome- clobazam, valproate, topiramate, lamotrigineand recently , as an add on, rufinamide
V. Infantile spasms: ACTH
VI. Dravet syndrome: Valproate and benzodiazepines such as clobazam or clonazepam

Q4 10-year-old child from Bihar presented with headache since last 1 month and 1 episode of seizure. Antiepileptic was started. CECT was done and it showed multiple cysts with scolex. Management includes:
(A) Start steroid before anthelminthic, duration 3 days
(B) give steroid after antihelminthic dose has been completed
(C) Steroids to be given for a total of 14 days, starting before antihelminthic therapy
(D) No role of steroids in therapy

Ans (C). Steroids to be given for a total of 14 days, starting before antihelminthic therapy

Explanation : Nelson 20 edition page 1751
NCC should be suspected in a child with onset of seizures or hydrocephalus and who has alsohas a history of residence in an endemic area or a care provider from an endemic area. The most useful diagnostic study is MRI head. The protocscolex is sometimes present in the cyst which provides pathognomic sign. The initial mamnagement should focus on symptomatic therapy for seizures and/ or hydrocephalus.
Albenadazole is the most commonly used antiparasitic (15 mg/kg/day) to be used along with fatty meal to improve absorption. The most common duration of therapy is 7 days for parenchymal lesions. However, longer duration, higher dosese and combination therapy with praziquantel is indicated for subarachnoid disease. A worsening of symptoms can follow use of either drug based on host' s inflammatory response to the dying parasite. Patients should be medicated with prednisolone 1-2 mg/kg per day beginning before the first dose of antihelminthic and continuing for at least 2 weeks.

Q5 A 2-year-old child with steroid dependent nephrotic syndrome has come to you in OPD for advise with regard to his immunization schedule. Which of the following is false with regard to his immunization?
(A) Give only killed vaccine
(B) Don' t give OPV to sibling
(C) Continue all immunizations as usual
(D) Pneumococcal vaccine before starting treatment

Ans: (C) Continue his immunization as usual
Explanation: (reference Nelson 20 edition page 1256)

I. Children receiving corticosteroids(≥ 2 mg/kg/day or ≥ 20 mg/day of prednisolone or equivalent) for more than 14 days or more should not receive live vaccines until therapy has been discontinued for at least 1 month.
II. Children on the same dose levels but for < 2 weeks may receive live vaccines as soon as therapy is discontinued.
III. Children receiving lower dosages may be vaccinated while on therapy.
IV. Immunization in Nephrotic syndrome
- To reduce the risk of serious infections in children with nephrotic syndrome, full dose of pneumococcal vaccination(with 13 valent conjugate vaccine and 23 valent polysaccharide vaccine) and influenza vaccine annually to the child and their household contacts
- Defer vaccination with live vaccines until prednisolone dose is < 1 mg/kg daily or 2 mg/kg on alternate days
- Live vaccines are contraindicated in children receiving corticosteroids sparing agents like cyclophosphamide or cyclosporine

Q6 A 6 year old boy was brought with complaints of abdominal distention and constant dragging sensation. He is also complaining of oral bleeds. General physical examination reveals purpuric rashes over the trunk. Most likely diagnosis is :

(A) Aplastic anemia
(B) Immune thrombocytopenic purpura
(C) Acute lymphoblastic leukemia
(D) Vitamin K deficiency bleeding

Ans. (C) Acute lymphoblastic leukemia

Explanation :

Aplastic anemia: Aplastic anemia is a syndrome of bone marrow failure characterized by peripheral pancytopenia and marrow hypoplasia. Children may present with recurrent infections and bleeds. However hepatosplenomagealy is absent in Aplastic anemia.

ITP: results in a well child with previous history of a viral infection. CBC shows thrombocytopenia. Usually Haemoglobin is normal unless there is massive blood loss.

Acutelymphoblastic leukemia: Children may present with hepatosplenomegaly, fever (prolonged), dragging sensation in the abdomen, bone pains, bleeding. Peripheral smear may show atypical cells .

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