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INSTRUCTIVE CASE

PUSTULAR LESIONS AND POOR SENSORIUM IN A 9 YEAR OLD BOY

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N. C. 9 y.o. Male, from Angat, Bulacan was admitted due to decrease in sensorium.

He was apparently well until three days prior to admission, his mother noted multiple pustules in his right sole which he later punctured with a needle and with subsequent drainage of pus. He then developed low-grade fever in the afternoon. No medication were taken nor consultants done.

Two days prior to admission, he had undocumented high grade fever temporarily relieved with paracetamol (10mg/kg), associated with generalized eythemathous papular rashes involving the face, neck, trunk and the extremities that spontaneously resolved after a day. There were no associated cough or colds, abdominal pain, headache and diarrhea. No consults were neither done, nor other medications taken.

The day prior to admission, the patient was still febrile but this time paracetamol offered no relief. He was then noted to be restless with three episodes of non-projectile vomiting of previously ingested food. His parents gave him dicycloverine, affording relief of the vomitting. He also complained of chest pain and tenderness of the left pelvic and thigh areas making mobilization of the left hip very painful.

Four hours prior to admission, with worsening of the fever, left thigh pain and tenderness, chest pain especially on deep breathing, pallor, decreased in urination and irritability, he was brought to a local hospital and was admitted. The assessment was bacterial meningitis. Chloramphenicol IV (71mg/kg/day) was started. He was the noted to be drowsy and slept most of the time prompting the parents to transfer him to the Philippine General Hospital (PGH).

There was no note of seizure, blurring of vision, ear discharge, gum bleeding, sore throat, cough or colds, orthopnea, abdominal pain, melena, nor hematochezia. No history of dog bite, drug ingestion or exposure to toxic substances. What was noteworthy is his hobby of swimming in the Angat River during the afternoon where he gets bruises, scratches and punture wounds which he never complained to his parents.

On physical examination, he was stupurous with shallow rapid breathing, BP: 80 palpatory HR: 120's bpm RR: 30's breaths/min T: 39°C wt: 26 kg ht: 128 cm S: 97% W: 106%, No naso-aural discharge. He had neck rigidity, shallow rapid breathing, hypoactive bowel sounds, Grade I bipedal pitting edema and a 12 x 10 cm erythematous and tender area on the lateral aspect of the left pelvis extending to the lateral aspect of the proximal third of the left thigh asociated with limitation of movement. He had no rashes, but with dried multiple punture wound on right sole. He also had cold-clammy extremities, faint pulses, and a prolonged CRT (>4 secs).

On neurologic exam; his best response are eye opening to speech, moans and withdraws to pain, GCS: 9 (E3V2M4), with Doll's eye, no facial asymmetry, hyporeflexive on all extremities, with no spontaneous movement but with equal withdrawal of all extremities to pain, positive for the meningeal signs.

At the emergency room an initial impression of CNS Infection probably: Viral encephalitis vs Suppurative Meningitis were considered. The patient was brought in stuporous with GCS of 9 (E3V2M4), cold clammy extremities, faint pulses, BP: 80 palp, fluid challenge w/ pLRS, 20 cc/kg was infused until BP: 90/60 was appreciated. The sensorium was noted to be decreasing thus intubation was done.

Preintubation ABG showed compensated metabolic acidosis with hypoxemia. The patient was initially hypoglycemic thus D10W was given. Fluid challenges were also given to improve hypotention. Dopamine was also started at 5 ug/kg/min with notes of improvement. Ceftriaxone at 76 mg/kg/day, oxacillin at 300 mg/kg/day, Vitamin K 10 mg slow IV OD, paracetamol at 10 mg/kg q 4 hrs, Famotidine 0.8 mg/kg/day. He was then transferred to the ward. In the ward, he was noted to be hypotensive thus Dopamine was increased to 20 ug/kg/min and Dobutamine at 10 ug/kg/min and epinephrine drip was started. BP and pulses improved, skin became warm. However the patient remained tachycardic. He was hooked to mechanical ventilator with the same setting and transfusion of fresh frozen plasma and pRBC were started. Poor pulses were still noted and 10 cc/kg of

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pLRS was repeated with note of improvement of pulses. Correction of bicarbonate was done with $NaHCO_3$ 1 meq/kg and ABG revealed compensated metabolic acidosis with the following values.

Based on the history, physical examination and initial laboratory examination, what is your diagnosis? See page 37 for Denoument.

The following are N.C.'s laboratory results done on admission:

CBC

Hgb	103.5
Hct	0.26
BWC	4.25
S	0.26
L	0.18
Stb	0.28
Plt ct	107

Prothrombin time

Patient	24.8
Control	12.2
INR	2.12
Activity	0.36

Blood Chemistry

BUN	11.38
Creatinine	100
Na	124 (↓)
BWC	4.25
K	4.1
Cl	91 (↓)
ALT	52
AST	133 (4xN)
Alk Phos	60
TB	8.04
DB	6.07(↑)
IB	1.37 (↑)D
CK total	25,880
CK-MB	5.34

Urinalysis

Color	Yellow
Apperance	Cloudy
SG	1.030
Blood gas 5/8/01 PH	6.0
Alb	+2
Sugar	Neg
WBC	0-3
RBC	0-2
Coarse granular cast	+
Culture	No growth after 2 D

Arterial Blood Gases

Settings	FiO2 100% Post hydration	FiO2:100% TV: 260 RR: 30 Post 1 meq $NaHCO_3$
PH	7.447	7.476
pCO_2	22.5	26
pO_2	55	174
HCO_3	95.7	19.4
B def	-8.5	-4.4
O_2 sat	90.6%	99.7%

Activated Partial Thromboplastin time

Patient	97.1
Control	87.8

CURRENT ABSTRACTS

ANTIBIOTIC TREATMENT OF RESPIRATORY INFECTIONS BY HONG KONG GENERAL PRACTITIONERS

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Around the world, antibiotics are widely used to treat minor self-limiting infections, and this use leads to development of resistance in community bacteria. Obtaining data on community prescribing is difficult since it requires linkage between diagnosis and the prescriptions arising from them. We obtained a dataset of 'logbooks' for a course exercise from 24 doctors undertaking the course for Diploma in Family Medicine.

Over half of the consultations are for respiratory infections. Antibiotics were prescribed for all cases diagnosed as acute tonsilitis,and 80% of pharyngitis. However, they were also prescribed for 35 to 50% of cases diagnosed as cough, bronchitis and chronic obstractive airway disease, and childhood asthma, though not adult asthma. Antibiotics were prescribed for 32% of adults and 41% of children with diagnosis of Upper respiratory infection.

No penicillin was prescribed for any of these diagnoses. Further analysis were focused on patients with "Upper respiratory infetions". Amoxicillin was the most common, and combination with clavulanic acid or sulbactam next. Cephaloporins were commonly used, including more second-generation drugs than first. Erythromycin came third. Some expensive new drugs were prescribed, such as ciprofloxacin and clarithromycin, but some older and illogical drugs such as Ampiclox and lincomycin were also used. Individual doctors used between 2 and 7 different drugs for this single diagnosis.

This may be the first such detailed data from doctors in Hong Kong. It shows that even these doctors who are trying to improved themselves by attending courses have illogical patterns of prescribing. This may be due to influences from the commercial situation of private practice, from drug company information, and confusing education from microbiologists, who on the one hand tell GP's not to prescribe, but on the other, frighten them and the community with information about rising prevalence of antibiotic resistance. During feedback and discussion, front line doctors described thier difficulty reconciling these massages, and deciding what to do. Improvement may occur if a consistent message is given to both doctors and patients, along with techniques for education and behaviour change.

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