**CHILD WITH FEVER: CASE STUDY**

**CHILD’S NAME: RILEY S/O KAYLA.**

SUBMITTED BY:

(YOUR NAME)

**Abstract: -** This case study, is being performed on an 18 month old male. This child is suffering from restlessness, and is unable to sleep. He has slight allergies problems. Careful case study of the patient reveals how his allergy has grown up to become the serious disease, i.e. allergic rhinitis.

**Introduction**

**History of the child.**

This child is an 18 month old male. Initial examination has been done by his mother, and she has discovered that the child is suffering from fever and is having difficulty in sleeping. Any associated symptoms are unknown in the child. Severity of the problem is unknown to the mother. The child was born in 34 weeks gestation time via c-section. At the time of birth, his weight was 5lb 1oz. His mother had gestational diabetes and preeclampsia. 8 weeks ago this child’s location had been shifted from his father’s house to his grandparents’ house. The child is quite active and plays vigorously indoors and outdoors. He has healthy habits and brushes his teeth twice every day. He takes proper meals.

This is the child’s first hospitalization and reports say that he has had certain allergies. No surgery has been done on him till now. He has only had certain vaccinations, but the mother is unaware of the vaccinations which have been done. Also, there are no neurological, lymphatic, respiratory, musculoskeletal, genitourinary or cardiac disorders. Health history of this child’s mother is known but that of the father is unknown.

The mother has given the following medications to the child: - Cetirizine, 1/2 teaspoon daily prn congestion/rhinorrhea with a max daily dose of 1 teaspoon/5mL and a children’s chewable multivitamin daily.

**History of the child’s mother: -**

The child’s mother is 25 years old. She is a smoker and started smoking at the age of 16. 25 months ago, she had quit smoking. She had suffered from gestational diabetes and had pre-eclampsia. Rest of the health record of this lady is fine. Her mother has a history of hyperlipidemia, Type IIDM and hypertension. Her father is also having history of hypertension, hyperlipidemia, and MI with stents.

**History of the child’s father: -**

He was a smoker as well. May be he smoked in the house around children.

**Red flags in the historical data: -**

1. First of all, both parents of the child are smokers. This will definitely have ill-effect on the growth of fetus. Even if the mother quitted smoking at the time of pregnancy, still it seems that the father had been smoking all around; in front of pregnant mother, lactating mother and the newborn. Ill effects of tobacco smoke include blockage in the respiratory tract, and edema. The given child’s condition can be suspected of this fact.
2. Second, the family environment is not good. Parents have recently separated. Studies (*Wang et.al. 2016*) have revealed that lifestyle, and behavior observed in front of child has pronounced effect in increasing rhinitis.

**Gathering history of a small child: -**

There are many important aspects about gathering history on a small child, which have been learnt from the present study.

1. While gathering the history, complete child information should be taken into account. History not only includes the parents (father and mother) of the child, but it also includes the grandparents (both maternal and paternal). Even the smallest piece of information can be highly valuable. For e.g. the maternal grandparents of the child had hypertension. Physical examination reveals pale mucosa, which is a symptom of being anemic. Now, if both the past and present aspects are combined, it reveals that the child may have a heart disease.

**Information that should always be taken into account.**

Now, if a child whom one has not seen before is admitted, then the following information should be gathered.

1. Initial details of the child, like name, address, parents name and occupation etc.
2. Environment of the child. This includes family environment and the area of residence of the child.
3. Complete medical history of the child.
4. History of child’s parents (father and mother): This should include parents’ occupation and occupational habits as well.
5. Details about siblings (if any). This should include the health record of the siblings since birth. If the sibling is suffering from any genetic disorder, then it’s details should be gathered separately by creating a family pedigree.
6. History about parents’ parents i.e. the grandparents of the child.
7. It should also be checked whether the problem/ case of child is similar to any family member or not. If yes, this should be taken into account separately.

**What data is most important to include in this particular case?**

There are many important data which is important and should be included in the particular case.

First, information about the father has not been included.

Second, vaccination record of the child should be included and is not there. May be, the allergy from which the child is suffering are being caused by the vaccinations given to the child.

**Which historical data that might be gathered on a well-child exam can be left out?**

Since the child is not suffering from any genetic disorder, so the pedigree analysis data can be and has been ruled out completely. None of the family members of the lady, mentioned in the case study, are suffering from any genetic disorder till now. Similarly the father is also not having any genetic/Mendelian disorder.

**Physical examination of the child:**

The blood pressure, temperature and heart rate of the child is normal. BMI of the child is 17.9 (95 percentile). HEENT (head, ear, eye, nose and throat) examination is also normal.

Tympanic membranes of the child are intact. EAC was unremarkable. Nares are patent. All these are normal symptoms. But the mucosa is pale. And rhinorrhea is observed. Neck is supple. This is also a normal symptom.

“Heart RRR without murmur” is observed. This is normal. Thyroid is also shown to be within normal limits.

Cardiopulmonary reports state that “lungs CTA throughout, RR even and unlabored, peripheral pulses regular and equal, radial and pedal pulses intact bilaterally. Cardiopulmonary examination of the child is normal.

 Now, let’s take an account of gastrointestinal examination. A rounded abdomen signifies slow digestion. It means that food is moving slowly through the gut. “Soft, non-tender, slightly round, active bowel sounds, and without masses or organomegaly”—all these points signify that the child is not suffering from abdominal pain.

Genitourinary examination states that both testes are present. So, this part of the report is also normal.

Musculoskeletal reveals that the child is able to run in room and climb on exam table. These symptoms state that there is no musculoskeletal problem also.

At last is the Cognitive Development report, which states that the child *“Verbalizes five words which include; Mama, dada, drink, juice, and no; Does babble; Majority of speech is unintelligible, able to feed self and is not potty trained.”* These are also normal symptoms.

**Differential diagnoses: -**

First of all, the child is weak and underweight. BMI calculations reveal this fact. Second, the child is having pale mucosa. So, it is suspected that the child can be anemic or may be having a heart disease. For checking this, complete cardiac examination of the child is essential. But the cardiac examination reports given here are normal. Further complete cardiac examination including ECG is recommended.

Third, the child is having rhinorrhea, i.e. runny nose. Further, mild cobblestoning has also been observed in pharynx. Tonsils are also slightly enlarged. Primary tooth eruption is occurring. This suspects that the child is suffering from **rhinitis or allergic rhinitis.** Sometimes supple neck signifies enlarged lymph nodes. In this patient, mild anterior cervical lymphadenopathy bilaterally has also been observed. The lymph nodes of the patient have been swollen. This is another cause of rhinitis.

Yellow color in tooth incisor occurs in adults due to consumption of tobacco products. Now, here this color is showing the effect of parents smoking habits on the child.

The child’s examination should be done by a trained ENT specialist, along with the pediatrician. If problems still persist after treatment, cardiac examination is recommended.

One factor which has been slightly ignored in treatment and is the most important is the home environment of the child. Studies (*Wang et.al. 2016*) have revealed that lifestyle, and behavior observed in front of child has pronounced effect in increasing rhinitis. This home environment includes the smoking habits of the parents of this child, Riley.

**References: -**

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