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PEDIATRIC MEDICAL EMERGENCY CONSULTATIONS: WHO, WHY AND HOW? ABOUT MOROCCAN 1000 PATIENTS.

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Abstract:-

The aim of our study is to draw up an inventory of the profile of the patients, attending the pediatric medical emergency department (PMD) at the Rabat hospital in Morocco, by studying the epidemiological aspects, the reasons, the circumstances, the relevance of the consultations, the reasons for the choice of PMD and the evolution after this consultation. The median age of our patients was 3 years. 69.8% were under 5 years of age, of whom 30.2% were less than 1 year old. The sex ratio was 1.1. Seventy-one percent of our patients came from a low socio-economic level. The most frequent reason for consultation was respiratory (28.6%), digestive signs (27.6%) and ORL (12%). Fever was associated with the reason for consultation in 29.2% of cases. 45.9% of the patients consulted between 24Hours and 72Hours after the beginning of the symptomatology. Only 16.6% of our patients were referred by a doctor. The choice to consult with the by the parents of our patients was justified by the request for a specialized opinion (42%) and the parent's unsatisfaction with the primary health care structure (29.2%). 63% of patients required ambulatory treatment and only 21.4% required a specialized consultation.

INTRODUCTION:-

The issue of pediatric emergencies is a topical issue, at the center of all concerns at all levels, the competent bodies and the hospitals concerned. The Pediatric Medical Emergency Department (PMD) deals with immediate and severe health need and treat children who need hospitalization. However, the definition of severity is not the same as that of the population, it is often assigned to be a medical resource in the broad sense, which treats a majority of children in outpatient care, often in ordinary and non-urgent cases.

The aim of our study is to draw up an inventory of the profile of the patients, attending the pediatric medical emergency department at the Rabat hospital, by studying the epidemiological aspects, the reasons, the circumstances, the relevance of the consultations, the reasons for the choice of PMD and the evolution after this consultation.

Materials and methods

It is a prospective descriptive and analytical study, conducted over a period of one month: from 02/01/17 to 05/02/17 in the department of PMD at the children's hospital of Rabat in Morocco. We included in our study all children under the age of 15 who consulted in regular days.

The information was collected by the emergency physician on a pre-established questionnaire with the consent of both parents, which consists of:

In the first part: the epidemiological data, including age, sex, accompanying person, social background, type of social security cover, educational level and socio-economic level of the parents.

In a second part: the consultation informations: the time and the reason of consultation of the patients, the clinical symptomatology, the consultation period after the beginning of the symptomatology, previous consultation or medication (in particular by self-medication or previous traditional treatment.)

In the third part: habits of consultation in the PMD including the number of previous consultations of the child for other clinical symptoms, as well as the motivations of the choice of the PMD.

The fourth part looked at the evolution at the end of the consultation.

Our service is located at the children's hospital of Rabat, in the university hospital of the capital of Morocco, located in the region of Rabat Salé Zamour Zair and populated by more than one million children.

Our service receives an average of 150 consultants per day. It is open 24 hours a day, 7 days a week, working with 4 doctors during the administrative hours (from 8.30 am to 4 pm) and 3 doctors during the residential care of (4 pm to 8.30 am the following day) supervised by 3 senior professor physicians.

Definitions:

-As far as the socio-economic level is concerned, we based ourselves on the classification according to the revenues of the High Commission for the Plan of Morocco.

-Ramed Medical Assistance Plan (RAM) has provided a basic medical coverage for the economically deprived population, offering free medical care and services available in public hospitals, Health and health centers, both in emergency situations and during hospitalization. Its financing is mainly provided by the State and local authorities.

We collected and analyzed the data using Statview software.

Results

Epidemiology (Table 1)

We collected and analyzed the responses of 1000 consultants to the PMD who agreed to answer our questionnaire.

The median age of our patients was 3 years (minimum age: six hours of life, maximum age: 15 years).

Sixty-nine percent (69.8%) were under 5 years of age, of whom 30.2% were less than 1 year old, and 10.8% were older than 10 years. The sex ratio was 1.1. Patients were accompanied by the mother (63.4%), the two parents (23%), the father (8.4%) or another member of the family (4.4%).

Eighty-four percent of our patients lived in urban areas.

Fifty-seven percent of our patients lived between 10 and 30 km from the Rabat child hospital.

Seventy-one percent of our patients came from a low socio-economic level. 15.8% of patients had no health coverage, 55% had RAMED.

33.6% of mothers and 22.8% of fathers of our patients were illiterate. 29.2% of mothers and 32.6% of fathers had secondary schooling.

Consultation procedures (Table 3)

Half of the patients consulted between 8 am and 4 pm during the administrative working hours.

During the guard; 15.2% of patients consulted between 16H and 20H, 21.4% between 20H and midnight and 13.6% between midnight and 8H.

Regarding the consultation period: 45.9% of the patients consulted between 24Hours and 72Hours after the beginning of the symptomatology, 19.8% of the patients consulted beyond 7 days after the start of the symptomatology.

The parents who came directly to the PMD after consulting in another health structure for the same reason represent 61.2% of the cases:

Represented by public health center (19.8%), PMD (18.8%), peripheral hospital center (9.8%), private general practitioner (7.4%) and a private pediatrician (5.4%).

Only 16.6% of our patients were referred by a doctor.

The reason for consultation was as follows: (Table 2)

-Respiratory signs in 28.6% of cases: cough (11.8%), rhinorrhea (7%), nasal obstruction (4.2%) Respiratory distress (5.6%),
-Digestive signs in 27.6% of cases: Vomiting (8.6%), abdominal pain (7%), diarrhea (5.2%), constipation (2.6), infant colic (4%), digestive haemorrhage (2%)
-ORL signs in 12% of cases: odynophagia (4.4%), otorrhea (4%), otalgia (3.6%),
-Cutaneous signs in 9.6% of cases: eruptions (5.4%), pallor (3.2%), jaundice (0.4%), lesions of the scalp (0.4%), gluteus erythema (0.2%)
Neurological signs in 6.4% of cases: headache (2.2%), convulsions (1.4%), hypotonia (1.2%) delayed psychomotoracquisition (1%) awareness disorder (0.4%) motor deficit (0.2%)
Fever was associated with the reason for consultation in 29.2% of cases.
Half of our patients received an antipyretic and 20% received an antibiotic by self-medication, 8.9% received a traditional treatment before going to the PMD.

The motivations of the choice of the PMD.
We studied the habits of use of PMD: 1% of the patients only consult the PMD and this for any clinical symptomatology, they consulted more than 10 times to the PMD. 38.6% have already consulted once, 25.2% have consulted more than twice for different reasons for consultations.
The choice to consult with the by the parents of our patients was justified by (Diagram 1):
-the request for a specialized opinion in 42% of the cases.
-the parent's unsatisfaction with the primary health care structure in 29.2% of the cases, they mentioned previous bad experience (13.4%), lack of confidence in skills (11.2%), High waiting time in health centers (4.6%),
- the habit (15.6%): the reason for consultation considered serious by the parents (14.6%), the ignorance of the alternative (12.8%), the desire for a second opinion (12%), lack of alternative (weekend, night) (11.2%), the possibility of additional radiological and biological examinations (10.4%), the patient has already been hospitalized (4.6 %) Or follow-up in consultation (3.2%) in the hospital, are the reasons explaining why the parents of the patients bring them to the PMD.

The evolution at the end of the consultation
Sixty-three percent of patient's required ambulatory treatment, 9.1% were referred to the health center for follow-up, and 5.6% received childcare advice. Only 21.4% required a specialized consultation.

Discussion
Four thousand five hundred children under 15 years old consulted the PME between 02/01/17 and 05/02/17.448 required hospitalization, 1000 patients agreed to answer our questionnaire.
Our study highlighted the high attendance of children aged less than 5 years, accounting for more than two-thirds of consultants (69.8%). Patients under 1 year of age constitute 30.2% of our patients.
In the Devictor study [1], children under the age of 5 account for more than half of consultants in the emergency room, in Berthier [2] 46% of patients are under 2 years of age and claudet [3], the highest rates of emergency use are concentrated at the extreme ages of life, 48% among children under 1 year of age. Other studies have shown that the age of less than 1 year is a criterion of recurrence of the visits to the emergencies [4, 5, and 6]
This is related to a greater concern of parents with any clinical symptomatology in children under one year, with an overestimation of severity in this age group [7]. In fact, close to one parental couple in two uses an emergency device during the first year of their child's life [8].
In our context, this age group, and children under 5 in general are referred from primary health facilities in the absence of a pediatrician, so parents consider it necessary for their child to be examined by a pediatrician. This demonstrates the real need for pediatric skills as well as the need to train general practitioners in this field.
A survey carried out over 1 week in ten Paris hospitals [9] showed that 80% of children were from relatively low socio-economic families. Other studies have shown that a disadvantaged socio-economic context is a risk factor for the recurrence of emergency room visits. There are two types of consultants, one called "disadvantaged" whose "backward" representation of emergencies would be similar to dispensaries; It is not the quality of the service sought in the emergencies that motivates it, but its nature; The other called "consumerist", would be a consultant belonging to the middle-upper class: considering emergencies as a hypercontemporary and very reactive place of care. [2, 6, 10]
Our study found that children from families of low socioeconomic status (71.2%) had minimal school attendance and coverage (55% of patients had RAMED, benefiting from free health care). They come from regions with a strong presence of primary health facilities such as health centers, peripheral hospitals and liberal doctors (general practitioners and pediatricians).
Half of our patients consulted between 8:00 am and 4:00 pm (These schedules correspond to working hours at the health centers, the offices of general practitioners and paediatricians) and the outpatient hospitals (excluding emergency departments) The other half involves a period of less continuing care or insufficient liberal consultation.

This highlights two aspects of emergency attendance

- The first: PMD are the first choice even when other primary health facilities are accessible. Thus 83.4% of our patients consulted directly with the PMD, the number of patients consulting directly in the emergency (without being referred) is high in other series: 80% in the series of Devictor and 54% in the series of Berthier.
- The second is the shortage of the permanence of public non-hospital care.

Indeed, the absence of coercion (no appointment, third party paying and free / RAMED), acceptance of any patientindependently of his / her social coverage, the idea that the emergency department is a place quickly accessible for care, which is not always of an urgent nature, as the nature of the reasons for consultations with our patients shows, leads inevitably to an overload of hospital emergency services, a constant increase in their attendance at the expense of « urban » medecine straining their performance and, ultimately, the degree of patient satisfaction.
More than half of our patients consult PMD for specialized advice and to benefit from the skills of doctors of the CHU, expressing in one third of their cases dissatisfaction with the structures of the primary health care system.
The use of emergencies for a second opinion concerned 61.2% of our patients. This important proportion is explained by a new perception of the disease and the use of care. The problem is not always related to the diagnosis and treatment but to the symptom and its persistence. The medicalization lasts the time of the evolution of the symptoms leading to a certain medical nomadism. The desire for care is immediate, irrespective of the nature and importance of the pathology.
Three main problems were identified: the fragility of the contract of trust between patient and physician, the weakness or lack of explanations provided to the patients, in particular the possibility of the persistence of certain symptoms under treatment, Health and the lack of knowledge of the health system.
78.6% of our patients could be treated in primary health facilities and only 21% of patients needed specialized advice.
Other studies have pointed out that a large proportion of "urgent" consultations do not actually require hospital care and could be managed in town medicine, requiring no further biological or radiological examination or hospital supervision. 41% of the children had a simple consultation without a new prescription in the Berthier series [2, 11]. Vital childhood emergencies represent less than 10% of consultations, about 1% for children under 1 month [10, 12]

Conclusion

The development of genuine care networks where primary health structures will play their full role is fondamental. Specialized trainings of healthcare personnel, restructuring of reception systems (child care system) and information campaigns to the public can restore an attractive image of these structures among the population and thus reduce the superfluous influx into PMD.
It is also necessary to think of a circuit to manage certain chronic pathologies, to set up a sorting system allowing the rapid management of vital emergencies and to direct other patients to a pediatric consultation.
This is to avoid the congestion of emergency services, their saturation and therefore the risk of delaying urgent care, while ensuring a good performance and maintenance of quality of care.

EPIDEMIOLOGICAL CHARACTERISTICS	Effectif (n=1000)	POURCENTAGE
Age		
<1year old	302	30,2
De 1year à <5years	396	39,6
De 5 years à <10 years	194	19,4
≥10 years	108	10,8
SEX		
male	538	53,8
female	462	46,2
ACCOMPAGNEMENT		
Two parents	230	23,0
Mother	634	63,4
Father	84	8,4
Grandmother	44	4,4
others	8	0,8
Middle		
Urban	848	84,8
rural	152	15,2
PROXIMITY		
<10Km	294	29,4
10-30Km	574	57,4
30-100Km	86	8,6
>100Km	46	4,6
SOCIO ECONOMIC LEVEL		
low	712	71,2
Medium	258	25,8
High	30	3,0
SANITARY COVER		
Ramed	550	55,0
CNOPS	78	7,8
CNSS	120	12,0
MAFAR	46	4,6
Assurances	48	4,8

none	158	15,8
MATERNAL SCOLARITY		
Primary	232	23,2
Secondary	292	29,2
Universitary	140	14,0
Unschooled	336	33,6
PATERNAL SCOLARITY		
primart	230	23,0
secondary	326	32,6
universitary	216	21,6
Unschooled	288	28,8

Table 1: Epidemiological data: Age, sex, accompagnement, middle, proximity to the hospital, socio-economic level, health cover and parental education.

Clinical signs	Effectif (n=1000)	Pourcentage (%)
RESPIRATORY		
cough	118	11, 8
Respiratory distress	56	5,6
rhinorrhea	70	7
Nasal obstruction	42	4,2
DIGESTIVE		
Colic	40	4
vomiting	86	8,6
constipation	26	2,6
Diarrhea	52	5,2
Gastrointestinal bleeding	2	2
Abdominal pain	70	7
ORL		
earache	36	3,6
otorrhoea	40	4
odynophagia	44	4,4
-Cutaneous signs		
Eruption	54	5,4
icterus		0,4
Nappy rash	2	0,2
Pallor	32	3,2
Scalp lesions	4	0,4
NEUROLOGIC		
Convulsions	14	1,4
Loss of conscience	4	0,4
Hypotonia	12	1,2
Moteur deficit	2	0,2
psycho motor delay	10	1
Céphalagia	22	2,2
RHUMATOLOGIC		
Arthralgia	12	1,2
lameness	4	0,4
Walking disorder	4	0,4
CARDIAC		
Cyanosis	2	0,2
Palpitations	8	0,8
Chest pain	20	2
others		
Isolated fever	40	4
Cring	12	1,2
Refusal to feed	14	1,4

Hemorragic syndrom	6	0,6
Mass	6	0,6
Adenopathy	14	1,4
Malformations	4	0,4
stuting	12	1,2

Table 2: The reasons for consultation with the PMD.

CONSULTATIONS	EFFECTIFS (n)	Pourcentage (%)
CONSULTATION SCHEDULES		
From 8am à 16pm	498	49,8
From 16am à 20pm	152	15,2
From 20pm à 00pm	214	21,4
From 00am à am	136	13,6
TIME of CONSULTATION		
<24hours	76	7,6
between 24H et 72H	459	45,9
between 3 à 7 jours	255	25,5
≥7 days	198	19,8
unspecified	13	1,3
Previous consultation to PMD for another Clinical symptomatobgy		
none	361	36 ,1
once	386	38,6
from 2 to 10 times	242	24,2
>10 times	11	1,1

Table 3: Consultation Modalities.

Conflict of interest: none.

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