The pediatrician and Defensive medicine : Results of a survey conducted in university hospitals in central and south eastern Tunisia

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ABSTRACT

Defensive medicine is a medicine that consists of protecting oneself by asking for sometimes useless examinations or by giving up certain practices for fear of legal problems. This concept, widespread in the United States since the 1970s, began to be known in Europe a decade ago.

Objective : Following the increase in the number of complaints against doctors and more particularly against a resident trainee in Pediatrics in our region, we conducted this survey with the main purpose of determining the degree of influence of these events on the practice of a defensive medicine in pediatrics.

Materials and methods : This is a cross-sectional study based on the analysis of an anonymous survey given to pediatric residents, specialists and university hospital doctors from the various university departments of pediatrics and neonatology of central and southern East Tunisia during the period between March 1 st 2017 and June 30 th 2017. It included different parts dealing with the influence of the fear of the complaint on the different practices of asked doctors, the impact on the future practice and the various possible solutions to protect themselves.

Results : A total of 82 doctors were approached (44 pediatric residents and 38 pediatricians). Five pediatricians had seniority of more than 20 years and 18 had seniority of 11 to 20 years. During their course, 86.6% of pediatricians had at least one litigation, and 90% of the rest witnessed at least one litigation. These were verbal threats (79.3%), legal complaints (12.2%: 10 cases including 5 pediatric residents) and physical assault (14.6%: 12 cases). The most common causes of litigation were parents' impatience and nervousness (47.6%), dissatisfaction with care (46.3%) and disagreement about hospitalization or discharge from hospital (34.1%). Only 40.9% of the physicians who had litigation felt that they had been supported by the structure where they practiced at the time, and 57.3% say that this incident influenced their behavior, so they practice a defensive medicine. . They deliver more comprehensive oral information (51.2%) and pay more attention to keeping the medical file (58.5%). They became more suspicious of certain gestures (transfusion of blood products (41.4%), sedation for imaging (37.8%), medical transfer (18.3%) and the drafting of medical certificates (31.7%). %)). More than half of the pediatricians surveyed think that fear of complaint could change their choice of subsequent facility. 64% are oriented towards the practice of medicine abroad. Not all physicians surveyed know their rights and the laws governing their work and do not feel protected during the practice of their profession. A significant link has been established between the feeling of forensic pressure of pediatricians and the practice of defensive medicine and the decision to leave the country. Young people are the most exposed to these practices.

Conclusion : Defensive medicine is a known concept, but it seems relatively recent in Tunisia and more particularly in the practice of pediatrics. It is an expensive, non-patient-centered medicine that contributes to overconsumption of care. The standardization of protocols by Tunisian learned societies and the adaptation of laws to the practice of medicine are among the most frequently cited proposals in our investigation to protect themselves without switching to defensive medicine.

Keywords : pediatrics, defensive medicine, medical liability, judiciarization.

INTRODUCTION

The relationship between doctors and patients was long based on a total trust of the patient in his doctor. Nowadays, this model is no longer applicable. Evolutions in the socio-cultural, political and medical fields have modified the behavior of patients and physicians who are evolving this relationship towards an alternative

model, that of autonomy and self-determination of the patient that requires more security in acts and the therapeutics decided by the doctor, thus causing a crisis of confidence with respect to medicine and doctors. This evolution has favored a shift towards a judicialization of the relationship between doctors and patients, especially since there is growing media coverage of scandal cases [1]. We can thus fear a drift towards a defensive medicine that is defined by the American Medical Association as "an alteration of the modalities of medical practice, induced by the threat of responsibility, the main purpose of which is to rule out the possibility of prosecution by patients as providing a solid legal defense in the event that such proceedings are initiated "[2]. Medical decisions are then guided more by the desire to guard against medico-legal risk than that of providing appropriate care to patients. Some of these modifications can be constructive (the updating of one's knowledge, the best keeping of the medical file,...) but others can lead to an inappropriate practice of medicine. This defensive medicine is illustrated in two forms: the first is an active form of overconsumption of care (positive defensive medicine) which results in an over prescription of additional examinations, specialized opinions, hospitalizations, most of which are useless. The second is a passive form of avoidance (negative defensive medicine) which consists of evasion of all forms of medico-legal risk, whether by avoiding the realization of certain medical acts or by not taking charge of certain categories of patients likely to have complications. It can also involve accepting abusive requests from certain patients for the purpose of fleeing conflict [3]. Judicialization is defined by a propensity to favor the use of courts to settle disputes that could be settled by other means (amicable agreement, mediation..).

It was at the origin of the concept of defensive medicine that emerged in the United States since the 1970s, thus being the subject of numerous articles and many controversies [4]. In Europe, this concept has begun to grow over the past decade, with the fear of American drifting [5]. In Tunisia, to our knowledge, the studies devoted to this subject are very rare, despite the great debates and frequent judicial complaints that have upset the medical community, especially in the absence of a law relating to medical liability which is currently under discussion. Also, pediatrics seems to be less concerned by this topic than other specialties such as surgical specialties, resuscitation anesthesia and obstetrics [6,7]. Hence, the interest of our study.

METHODS

Hypothesis : Defensive medicine affects daily doctor's clinical judgment and practice.

Study design and data collection : This study was directed to assess the extent and the possible effect of defensive medicine phenomenon (in term of knowledge and prevalence) on medical decision making (development of tools that can guide physicians to make good decisions in practice) among different grades of hospital pediatric doctors, and to determine any experience of medical litigations with respect to sources and factors associated with it. The studied population was composed of pediatric residents, specialists, assistants, associate professors and pediatric professors practicing in the pediatric and neonatal departments of universal hospitals in five delegations in the central region of Tunisia (Sousse, Monastir, Kairouan, Mahdia and Sfax) for a period of 3 months (March 1 st 2017 to June 30 th 2017). The measuring instrument was an anonymous self administrated questionnaire based on a review of literature and discussions with pediatricians and pediatric residents on the topic of defensive medicine. It was distributed and collected by the investigator, and included different parts: the first part picks up the sociodemographic data, the second part assesses the direct impact of a complaint on the pediatrician's practice, the third part describes the level of apprehension towards complaints and tendency to practice a defensive medicine and the fourth part tries to glimpse solutions to protect oneself from the judicial risk in order to avoid the practice of defensive medicine. The outcome measures were changes in the professional practices of pediatricians before and after exposure to litigation, and the assessment of the link between the psychological impact of forensic pressure and its professional impact.

Statistics : Data were entered into a computer database and SPSS software (SPSS Inc., Chicago, IL, USA, version 21.0) and double checked before analysis. Chi-squire test was used and $P < 0.05$ was considered significant. Univariate and multivariate analyses were performed.

Bibliography : The bibliographic collection was conducted by querying the Pubmed and Sciencedirect database and consulting the bibliography of selected articles.

RESULTS

Characteristics of the respondents : The 82 interviewed physicians were divided into 20 men (24.4%) and 62 women (75.6%). The sex ratio (male / female) was 0.32. Their age varied between 25 and 61 years with an average age of 34 years and a median of 30 years. The most represented age group was the 25 to 34 years old one (62.2%). More than half of the surveyed physicians were pediatric residents (53.6%). University Hospital Assistants, Associate Professors and Professors accounted for 20.7%, 14.6% and 7.3% respectively. The majority of physicians (72%) had seniority of less than 10 years with an average seniority of 7 years and a median of 4 years.

Medical litigation : All the interviewed doctors believed that the number of legal proceedings against doctors is increasing in Tunisia. They claimed to have developed this idea from the media (85.3%) or the colleagues (48.7%). The majority of surveyed physicians (89%) didn't have an idea about the laws re-

lating to their exercise, nor their rights and duties. All doctors thought they are not protected during their exercise. The fear of the complaint was felt from 89% of respondents. The majority (86.6%) reported having had one or more disputes with patients during their studies. Most of those who did not have litigation reported having witnessed at least one litigation during their course. The majority of surveyed physicians (79.3%) reported having at least one verbal threat of complaint or physical assault during their pediatric medical curriculum. Twelve doctors were victims of a physical assault. A legal complaint was filed against 10 doctors (12.1%) including 5 residents, 2 university hospital assistants, 2 associate professors and a Professor. The three most common causes of the dispute were: irritability of the parent (47.5%), dissatisfaction of care (46.3%) and disagreement about admission or discharge from the hospital (34.1%). Other causes were : lack of information for parents (14.6%), refusal of additional examinations or treatments deemed unjustifiable (13.4%), delayed care (12.2%), the death of a patient (2 cases). Those causes were usually associated. More than half of the phycicians who had a dispute did not feel supported by the hospital in which they were working.

Professional impact of judicialization :

Modification of the workplace :

More than half of the surveyed physicians (56.1%) think that the fear of the complaint could change their future choice of working place. They were oriented towards the practice of their profession abroad in 64% of cases, while 32% preferred to work in the private sector and only 4% preferred to continue to practice medicine in the public sector. Of the 10 physicians who had litigation leading to a court complaint, five preferred to work abroad (50%) and two to move to the private sector (20%).

Practice of defensive medicine :

Defensive medicine was practiced by 57.3% of surveyed pediatricians. They stated that some of their practices were for their own protection rather than the patient's interest. At the same time, 89% of pediatricians thought that this defensive medicine had a high cost. The practice of defensive medicine was studied in both positive and negative aspects, and following a dispute.

Positive defensive medicine :

Forty percent (40%) of pediatricians reported having modified their behavior towards parents and 35.4% reported that they had become more attentive to the technique of physical examination of children and that they prescribed more complementary examinations (36.5%). Nearly half of physicians (51.2%) provided more complete oral information, 58.5% paid more attention to keeping the medical file and 46.3% asked more frequently for the opinion of another colleague.

Negative defensive medicine :

Most of the surveyed physicians (73.2%) would avoid certain acts. (Table 1). The avoidance mainly concerned the transfusion of blood products (40.2%), sedation for imaging (37.8%), and the writing of medical certificates (31.7%), the medical transfer (18.3%) and the lumbar puncture (18.3%).

Table 1 : Medical acts avoided by surveyed pediatricians (Negative defensive medicine).

Avoided acts	Number (%)
Transfusion of blood products	33 (40,2%)
Sedation before imaging	31 (37,8%)
Writing medical certificates	26 (31,7%)
Medical transfer	15 (18,3%)
Lumbar puncture	15 (18,3%)
Liver biopsy	15 (18,3%)
Endoscopy	12 (14,6%)
Kidney biopsy	12 (14,6%)
Placement of chest drains	8 (9,7%)
Placement of venous catheters	7 (8,5%)
Vaccination	7 (8,5%)
Exsanguino-transfusion	6 (7,3%)
Intubation	6 (7,3%)
Bladder catheterization	4 (4,8%)

Defensive medicine following litigation :

More than half of the physicians who had litigation (53.6%) said they had been influenced by this incident. The influence concerned several aspects; the most frequent were being more attentive for what is written in the medical file (23 cases), the request for written consent from parents for certain acts (20 cases), the excessive solicitation of opinions from colleagues or seniors (17 cases).), more difficult decision-making (17 cases), prolongation or extended indication of hospitalization (17 cases) and avoidance of confrontation with parents (17 cases).

Proposed Solutions to Prevent the Practice of Defensive Medicine :

Several solutions have been proposed to avoid defensive medicine practice by pediatricians :

- The majority of pediatricians (96.3%) think that it is necessary for the responsible authorities to start thinking on adapting the texts of laws specific to the practice of medicine.
- In 92.6% of cases, they propose a standardization of protocols by Tunisian scientific societies and emphasize the need to strengthen intra-hospital security.

The other solutions supported and proposed were the request for written parental consent (85.3%), collegial decision-making (84%), the renovation of the architecture of hospital structures (78%), strengthening the medical and paramedical team (73.1%), the best management of the risk of medical error and the mastery of professional skills (72%), the creation of intra-hospital information centers (52%) and the development of error learning (51%).

Factors associated with medical litigation and defensive medicine : (table 2)

Table 2 : Factors involved in the practice of defensive medicine.

Socio-demographic characteristics, litigation experience and legal knowledge		Practice of defensive medicine	No practice of defensive medicine	P
Gender	Male	11 (13,4%)	9 (10,9%)	0,5
	Female	36 (43,9%)	26 (31,7%)	
Age range	From 25 To 34 ans	34 (41,4%)	17 (20%)	0,025
	From 35 To 44 ans	9 (10,9%)	10 (12,2%)	
	From 45 To 54 ans	4 (4,8%)	3 (3,6%)	
	From 55 To 64 ans	0	5 (6%)	
Seniority interval	Less than 10 years	36 (43,9%)	23 (28%)	0,02
	Between 11 and 20 years	11 (13,4%)	7 (8,5%)	
	More than 20 years	0	5 (6%)	
Litigation experience	Yes	44 (53,6%)	27 (32,9%)	0,033
	No	3 (3,6%)	8 (9,7%)	

The practice of defensive medicine is significantly influenced by age and seniority in pediatrics. The younger and less experienced pediatricians, the more they resorted to defensive medicine. There is a significant link between having a dispute with a patient and the practice of defensive medicine. The nature of the litigation has no influence on the practice of defensive medicine. The chi-square test is not significant (p=0.13 for the verbal threat, p=0.47 for the physical assault, p=0.38 for the legal complaint). There is no significant association between practicing defensive medicine and witnessing a dispute (chi-square test not significant, p=0.5). Pediatricians believe that the medico-legal pressure they feel alters the doctor-patient relationship in 37.8% of cases. Women think it more than men (Likert average of 2.24 for women, 1.9 for men, with p=0.57). Pediatricians also believe that in the event of litigation, this relationship is further impaired. (Average of the Likert scale at 2.12 in case of litigation, and 1.81 in the absence of litigation, p=0.15), especially since it is a legal complaint (the average of Likert goes to 2.3, p=0.61). There is a significant relationship between fear of complaint and avoidance of certain medical procedures (p=0.01), including sedation for imaging (p=0.01) and transfusion of blood products (p=0.007). There is a significant relationship between the fear of the complaint and the decision to change the workplace (p=0.004).

DISCUSSION

To our knowledge this is the first published data on concept of defensive medicine and medical litigation among the Tunisian Pediatricians.

Litigation :

All Pediatricians had the impression that litigation against doctors is increasing, our rate is the most important comparing with a Tunisian study at the end of the year 2017 including all specialties [8], and also with an older French studies with rates ranging from 66.9% to 94.6% and a study in the United Kingdom with a rate of 90.6% [9]. This impression of soaring trials is still to be proven, especially since, in Tunisia, there is no exhaustive list of data on judicial proceedings against doctors with complexity of the judicial institution and diversity of procedures. Comparable percentages were found for the perception of forensic pressure (89%) and a much higher percentage of litigation (86,6%) than those in international studies [11, 12], than ours (12,2%) which is probably due to the 2002 Kouchner law which encouraged the use of the amicable ways to resolve litigations. For the causes of the litigation, our results are comparable to those of other studies; it follows a higher requirement of parents who ask for the fast cure and the absence of side effects, which testifies the lack of confidence and communication. More than half of pediatricians think they are changing their workplace for fear of complaining, and 64% are thinking of practicing medicine abroad. International studies show comparable results.

Defensive medicine :

The rate of defensive medicine we found (53.7%) is not far from those of French studies where rates have increased over the years from (54.3%) to (73.4%) [5, 13]. For the other countries, this rate varied between 28% and 93% with higher rates for large studies [9-20]. Young, inexperienced physicians practice more defensive medicine: older physicians started exercising far from the legal pressure, and the experience and confidence they gained allowed them to put the risk of trial in perspective. The influence of fear of complaint on the practice of defensive medicine was not proved in our study; the change in practices is based on general concern with significant results. In the USA, a decision to respect the parents' opinion for the resuscitation of newborns with a poor prognosis for fear of complaint is taken after the litigious cases of babies "Doe" (Trisomy 21 with an unoperated Oeso –Tracheal fistula) and "K" (resuscitation of a baby with anencephaly). In France, the fear of the complaint was accentuated after the Perruche 2000 judgment (complaint against the doctors for the non-recognition of the congenital rubella diagnosis) [21].

Criticism of defensive medicine :

Defensive medicine has several negative points: the additional financial cost (50-60 billion dollars a year in the USA) [4], adverse events such as imaging-induced cancers (0.4% in 2004 in the USA) [4], and the non respect of the code of medical ethics. Defensive medicine also alters the relationship between the doctor and the patient and puts an end to the relationship of trust between both of them. The advantages of defensive medicine are few; indeed, it allows better medical information and better record keeping.

Criticism of the judiciarization of medicine :

Data on court cases, medical liability and legal issues in Tunisia remain incomplete. The question is " is this a false problem that is fueled by the media? " In any case, we know that Tunisian pediatricians have little legal knowledge which has encouraged Medical Schools to create higher education in medical law. A Complementary study diploma in medical law was started in Sousse Medical School since 2017.

Situation of the specialty of Pediatrics in Defensive Medicine :

Pediatrics is not a very contentious specialty in reviewing the literature. It is ranked 10/28 in terms of legal complaints in the USA [6] and 16/18 in terms of judicial complaints in Tunisia [10]. But the rate of defensive medicine in the United Kingdom was 16.9% in Pediatrics versus 26.4% in Gynecology which is classified the most contentious, a rate that is not negligible [9].

CONCLUSION

Defensive medicine is a new concept that is common, poorly studied in Tunisia, and is a consequence of the judicialization of medicine. This is a concept that threatens medical practices, so studies in this area are encouraged by broadening the spectrum to the private sector and other parts of the country, with a view to adapting prevention solutions.

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