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Epidemiological aspects of non-traumatic pathologies of the hand: At university hospital aristide ledantec about 307 cases

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Abstract

Introduction: The hand represents the tool of tools. She is interested in various traumatic but also non-traumatic pathologies.

Purpose: To study the epidemiological aspects of non-traumatic pathologies of the hand and wrist.

Patients and Methods: This was a continuous, descriptive and analytical retrospective study over a period of 5 years from January 2017 to December 2021.

Results: There were 307 patients, 171 women and 136 men with an average age of 39,54 years (Range 03 months and 82 years). Manual workers and housewives were the most representative with 30,5% and 24% respectively. The right side was affected in 66,3% of cases. The preferred location was the wrist in 47,9% of cases. Degenerative and/or inflammatory pathologies were the most common in 32,9% of cases. Women presented a degenerative and/or inflammatory pathology in 65,3% of cases and men, an infectious pathology in 58,1% of cases.

Conclusion: Non-traumatic pathologies of the hand and wrist are diverse and varied. Their treatment should not be delayed for a favorable outcome.

Keywords: Hand, pathologies, non-traumatic, epidemiology

Introduction

Non-traumatic pathologies of the hand are frequent and diverse. In fact, there is a wide range of pathologies affecting the hand and wrist, with different incidences. Studies on these pathologies are rare. These include tumor, degenerative and/or inflammatory, infectious, nervous and malformative pathologies. Tumors of the hand are essentially benign in over 80% of cases [1]. Degenerative pathologies encompass several entities, including tendinopathies, which are frequent in practice [2], and canal syndromes, the most common of which is carpal tunnel syndrome [3]. Some of these pathologies can be life-threatening [4]. A thorough examination is required to diagnose the lesion and initiate appropriate treatment.

The aim of our work is to study the epidemiological aspects of non-traumatic pathologies of the hand and wrist in the Orthopaedics-Traumatology Department of the University Hospital Aristide le dantec.

Materials and Methods

This is a continuous retrospective cross-sectional study over a 5-year period from January 2017 to December 2021. We included in our study all patients who came for a consultation concerning any non-traumatic pathology of the hand and/or wrist operated or not, followed in the department during the period. Patients with trauma or post-traumatic sequelae were not included, nor were patients whose records were not found or lost to follow-up.

In all, 12880 scheduled consultations were carried out for the upper limb over the 5-year period. We identified 575 patients with non-traumatic pathologies, 381 of whom involved the hand and wrist. Of these, 307 met our criteria.

Data collection

We have designed a data processing form based on specialized hand consultation registers and hospitalization records, to collect data on civil status, clinical and radiological pathology, treatment and evolution.

Results

Descriptive study

Frequency: We found 381 cases of non-traumatic pathologies involving the hand or wrist out of the 575 cases seen in upper limb consultations, i.e. 66.3% of cases.

Age : The average age was 39.54 years, with extremes of 03 months and 82 years. The 28-37 age group was the most representative, accounting for 21.5% of cases (Figure 1).

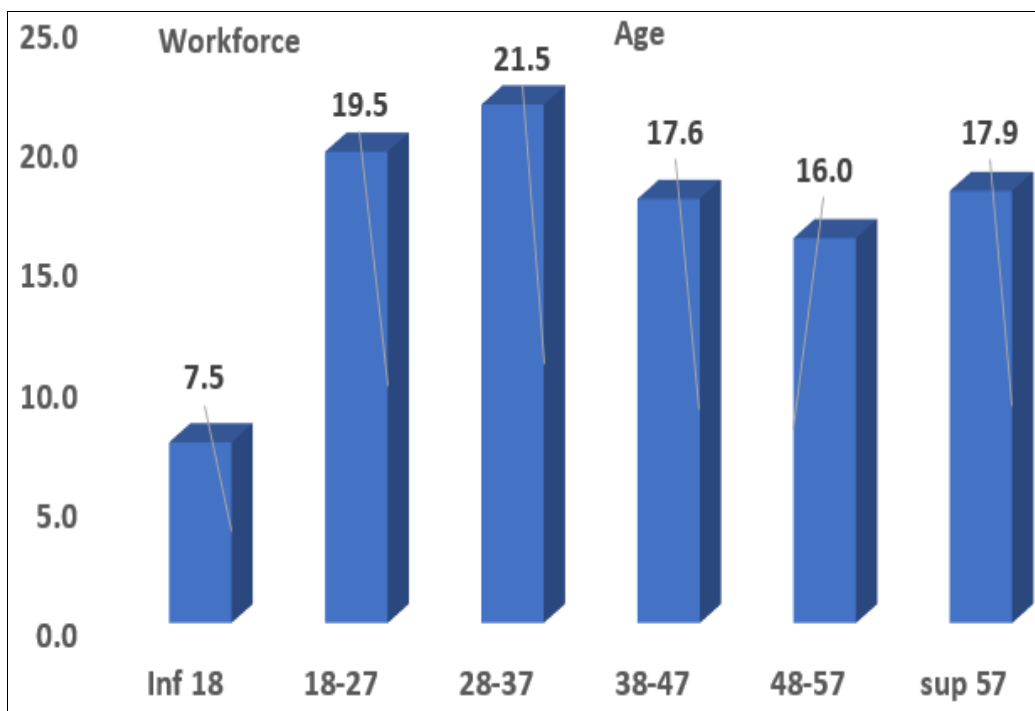


Fig 1: Patient distribution by age group

The sex: We had 171 female patients and 136 male patients. The sex ratio was 0.79.

The profession: The most representative functions were manual workers (94 or 30.5%), housewives (74 or 24%) and teachers (39 or 12.7%). (Figure 2)

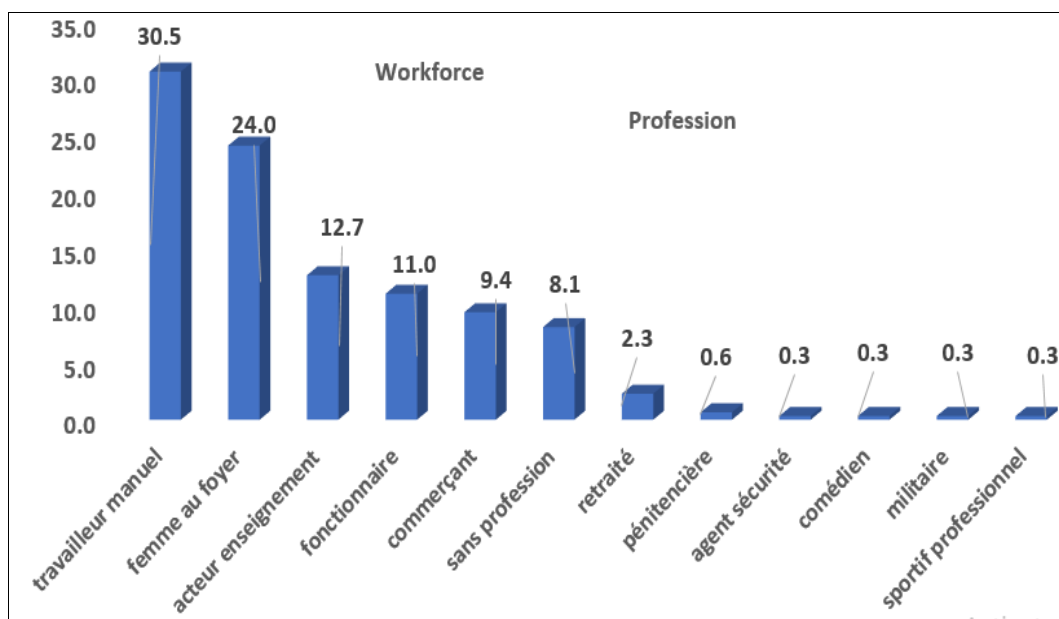


Fig 2: Breakdown of patients by activity sector

Place of residence

There were 298 patients residing in the Dakar region. Their different origins are shown below table I.

Table 1: Distribution of patients by place of residence

		Workforce	Percentage	Valid percentage	Cumulative percentage
Cities	Dakar	187	60,9	60,9	60,9
	Pikine	57	18,6	18,6	79,5
	Guédiawaye	40	13,0	13,0	92,5
	Keur Massar	9	2,9	2,9	95,4
	Thiès	6	2,0	2,0	97,4
	Rufisque	5	1,6	1,6	99,0
	Bambey	1	0,3	0,3	99,3
	Kaolack	1	0,3	0,3	99,7
	Touba	1	0,3	0,3	100,0
	Total	307	100,0	100,0	

Analytical study

We have performed 2 types of correlations:

- Correlation between type of pathology and sex;
- Correlation between type of pathology and sector of activity;

Correlation between type of pathology and gender

Relationship between degenerative diseases and gender:

The table II shows the relationship between degenerative pathologies and gender. Men represented 34.7% and women 65.3%.

Table 2: Correlation between degenerative and inflammatory pathologies and gender

			Gender		Total
			F	M	
Degenerative and inflammatory	Yes	Workforce	66	35	101
		% included in Degenerative	65,3%	34,7%	100,0%
	No	Workforce	105	101	206
		% included in Degenerative	51%	49%	100,0%
Total	Workforce	171	136	307	
	% included in Degenerative	55,7%	44,3%	100,0%	

P=0,001

Correlations between infectious diseases and gender

In infectious diseases, men accounted for 58.1%. These results are shown in the Table III.

Table 3: Correlation between infectious diseases and gender

			Gender		Total
			F	M	
Infection	Yes	Workforce	34	47	81
		% included in infection	41,9%	58,1%	100,0%
	No	Workforce	137	89	226
		% included in infection	60,6%	39,4%	100,0%
Total	Workforce	171	136	307	
	% included in infection	57,7%	44,3%	100,0%	

P=0,012

Correlations between pathology type and business sector

In the degenerative pathologies, 32.6% were housewives. For the other pathologies, 20% were housewives. These results are shown in the following table IV.

Table 4: Correlation between type of pathology and housewife

			Housewife		Total
			Yes	No	
Degenerative	Yes	Workforce	33	68	101
		% included in Degenerative	32,6%	67,4%	100,0%
	No	Workforce	41	96	206
		% included in Degenerative	20%	80%	100,0%
Total	Workforce	74	233	307	
	% included in Degenerative	24,4%	76%	100,0%	

P=0,039

Discussion

Epidemiological aspects

Frequency: We were unable to find any studies on the frequency of non-traumatic pathologies of the hand and wrist. However, although the percentage obtained in our study is

significant, it does not reflect reality.

Not all patients seen in the department are listed, for several reasons that have been identified:

Hand injuries have a false reputation for being benign. As a result, many patients do not go to hospital for treatment. Sometimes, they turn first to bonesetters, and these lesions are found at the stage of sequelae, making treatment difficult, as we have seen with the sequelae of panariasis or malignant tumour transformations;

What's more, the majority of patients are treated in offices on the sly, and therefore not recorded in the files. In 1994, SEYE *et al.* [5] revealed that "unfortunately, some panariasis are incised in office corners by overworked doctors or nurses".

A significant number of cases are seen in the private sector, particularly for musculoskeletal disorders.

Age: It should be noted that this study was carried out in an adult orthopedics department and, apart from certain malformations in children, the other pathologies occurring in them are mostly referred to pediatric surgery. A study carried out in France by MARTY [6] established an average age of 48. For pathologies such as carpal tunnel syndrome. The excess incidence found in women in their fifties is also classically observed, partly due to the effects of the menopause on hydrosodic retention [7].

The genre: We had a M/F sex ratio of 0.79. The pathologies we encountered most frequently were tendinopathies, ductal syndromes and synovial cysts. The latter, as we know, are frequently found in women. For the first two, hormonal status has been incriminated [8]. A 2004 study of carpal tunnel syndrome in Maine et Loire found a M/F sex ratio of 0.40 [9]. The estimated prevalence of de Quervain tenosynovitis is around 0.5% in men and 1.3% in women [10]. It is also frequently encountered in women around the time of

pregnancy, as a result of hormonal phenomena. It is also known as "young mother's tendonitis", because it is triggered by the repetitive gestures that mothers have to make every day to care for their babies: carrying, handling, breast-feeding and changing them. All these activities place the thumb in a maintained extension alternating with its resistance when supporting the child's weight.

The profession: Our patients' sectors of activity were diverse and varied. Our figures reflect the predominance of patients engaged in manual labor, as well as housewives. For certain types of pathology, such as De Quervain's tenosynovitis, several professions have been incriminated as being at risk: housewives, seamstresses, musicians, physiotherapists ^[11], which correspond to the manual jobs in our study. American and Scandinavian studies have examined the association between work activities and De Quervain's tenosynovitis. The results of epidemiological studies have revealed an increased risk of wrist-hand tendonitis for workers in the meat industry and manual labor sectors ^[12].

In the case of giant cell tumors, MESSOUDI ^[12] considers them to be the prerogative of manual workers, particularly farmers. In the world of work, musculoskeletal disorders account for 87% of occupational illnesses. They mainly include back pain and tendinopathy.

Place of residence: Most patients were from the Dakar department (60.9%), followed by the Pikine department (18.6%). Patients tend to consult close to home. It should also be noted that there are orthopaedic surgeonfs in all outlying hospitals and in the regions, which considerably reduces the number of patients ^[13].

Conclusion

Non-traumatic pathologies of the hand and wrist are common. They are associated with functional and/or aesthetic discomfort, which can hinder activities of daily living and, in some cases, even professional life.

Conflict of Interest

Not available

Financial Support

Not available

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