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Research Article

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Epidemiological, Clinical, Paraclinical, Etiological and Evolutionary Profile of Bronchiectasis

Dia S[1]*, Thiam K[1], Mbaye FBR[1], Cissé MF[1], Ly M[2], Sagne JMAN[1], Ka W[1], Ndao M[1], Touré NO[1] and DiaKane Y[1]

[1]Pneumology Department CHNU de Fann Dakar- Sénégal

[2]Radiology Department CHNU de Fann Dakar-Sénégal

***Corresponding Author:** Dia S, Pneumology Department CHNU de Fann Dakar- Sénégal.

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Introduction

In tuberculosis endemic areas, bronchiectasis is one of the aftereffect that alter and disrupt the quality of life of patients. The aim of our study is to determine the epidemiological, clinical, paraclinical, etiological and evolutionary profile of bronchiectasis.

Methods

We report a descriptive retrospective study over a period of 12 months (December 2015 to November 2016) on 131 patients with bronchiectasis.

Results

Epidemiology

Our study included 131 patients with a relatively young population (mean age 44.87 years and extremes ranging from 16 to 83 years) and a clear male predominance (sex ratio was 1.85 including 85 men and 46 women). In the medical background, smoking was 38.16% (n = 50), pulmonary tuberculosis 77.09% (n = 101), and 4 patients living with HIV. (See Table 1)

Clinic

The symptoms were dominated by mucosal bronchorrhea (50.38%), muco-purulent (41.22%), exercise dyspnea (83.96%), hemoptysis (37.40%) and dry cough (8.4%). Fifty-two (39.69%) patients had digital clubbing and 17 (12.97%) patients had signs of right heart failure. (See Table 1)

Paraclinic

Chest imaging, in particular the thoracic CT scan, revealed more diffuse bronchiectasis (56.49% n = 74) than localized (43.51% n = 57) with a clear predominance of pure cystic forms (83.21% n = 57). 109) followed by mixed forms (14.50% n = 19) and pure cylindrical shapes (2, 29% n = 3). Associated signs were dominated by atelectasis in 53% of cases.

Cytobacteriological explorations allowed the isolation of one germ in 8 out of 10 patients, including 6 colonizations (4 pneumococci, 1klebsiella pneumoniae enterobacter) and 2 Escherichia coli infections sensitive to amoxicillin-clavulanic acid and resistant to ampicillin, ticarcillin and bactrim. Twenty-seven patients had carry out cardiac ultrasound with 48.15% of chronic pulmonary heart and 14.81% of isolated PAH. (see table 2)

Etiology

Etiologies were respectively post-tuberculosis in 77.86% of cases (n = 102) indeterminate (12.98% n = 17), occupational PID (3.05% n = 4), active pulmonary tuberculosis (2.29% n = 3), rheumatoid arthritis (1.53% n = 2), ciliary dyskinesia (1.53%) including Kartagener's syndrome and Young's syndrome and post-infectious non-tuberculosis (0.76%) (see Table 2)

Evolution

Two (2) patients underwent left lobectomy for an associated aspergillary transplant, 1 patient was on long-term oxygen therapy, and 15 deaths were noted. (See Table 2)

Comments

Our study, compared to the series made in Africa, particularly the Maghreb countries, with the series of Sahraoui K., *et al*. [1] in Algeria and Trigui., *et al*. [2] in Tunisia. We find that our study has a larger workforce with a male predominance. This could be explained by the capacity and the recruitment method of our service where we have 84 beds including 24 beds for women. Compared to the series of Sahraoui K., *et al*. [1], we notice the same diffuse topography with practically an average age that approaches with the same etiological profiles, the difference is in the forms of bronchiectasis (see table 3) Regarding the study by Trigui., *et al*. [2], we have the same profiles concerning gender and topography. Its etiological profile is closer to the European profile with ciliary dyskinesias as its main etiology.

Conclusion

In Senegal, bronchial dilatations are post-tuberculous, diffuse and a source of respiratory disability.

Annex

settings		Effective (n=)	Percentage (%)
Medical background and comorbidity	Pulmonary tuberculosis	101	77,09
	Tobacco use	50	38,17
	HIV infection	04	3,05
	Diabetes	06	4,58
	Circle cell disease	04	3,05
	Hepatitis B	03	2,29
Symptoms	Bronchorrhea	120	92,37
	Dry cough	11	38,17
	Hempotysis	49	37,40
	Digital clubbing	52	39,69
	Right heart failure	17	12,97

Table 1: *Clinical profile of bronchiectasis Dakar-Senegal (n = 131).*

Paraclinical Examinations			Effective (n=)	Percentage (%)
Thoracic CT scan	Diffuse bronchiectasis		74	56,49
	Localized bronchiectasis		57	43,51
	Cystic bronchiectasis		109	83,21
	Cylindrical bronchiectasis		3	2,29
	Mixed bronchiectasis		19	14,50
Cytobacter Iological examination of sputum	Colonization		6	60
		Pneumococcal	4	40
	Infection	Escherichia coli	2	20
Echocardiography	Chronic pulmonary heart		13	48,15
	Pulmonary arterial hypertension		4	14,81
	Normal		10	37,04
Etiologies	Post- tuberculosis		102	77,86
	Active tuberculosis		3	2,28
	Occupational diffuse infiltrative pneumopathy		4	3,05
	Rheumatoid arthritis		2	1,53
	post- infectious non-tuberculosis		1	0,76
	Ciliary dyskinesia		2	1,53
	Indeterminate		17	12,98
Evolution	Lobectomy		2	
	Long-term oxygenation at home		1	
	Death		15	

Table 2: *Paraclinical etiological and evolutionary profile of bronchiectasis Dakar-Sénégal (n = 131).*

Study	Year of study	popu lation	middle age	Sex	Topography	Form	Etiologies
Our study	2015-2016	131	44,9	Male	Diffuse	Cystic	Post-tuberculosis
Sahraoui .K al [1]	2013-2016	76	49	Female	Diffuse	Cylindrical	Post-tuberculosis
Trigui al [2]	2009-2016	50	57,49	Male	Diffuse		Ciliary dyskinesia

Table 3: *Comparison between the bronchiectasis profiles.*

References

1. Sahraoui K., *et al*. "Etiological and therapeutic radiological clinical profile of bronchiectasis in Oran. About 76 cases". *Revue des Maladies Respiratoires* 35 (2018): 236.
2. Trigui G., *et al*. "Current profile of bronhiectasis". *Revue des Maladies Respiratoires* 34 (2017): 252.