

# Prevalence of psychoactive substances use in primary spontaneous pneumothorax (PSP)

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**Context** : Marijuana is the most illicit PsychoActive Substances (PAS) abused in France. The primary pleural complication of illicit drug use is primary spontaneous pneumothorax (PSP). We present an analysis of the data of pneumothorax linked to PAS use.

**Methods** : In 39 AP-HP hospitals, we identified all PSP related to PAS between January 2013 and July 2014 from Programme de Médicalisation des Systèmes d'Information (PMSI) database with these inclusion criteria: all patients meeting ICD10 criteria of substance use (ICD10 F and T codes) and hospitalized with a pneumothorax ICD10 code (J93). In a second phase, to validate our data, we retrospectively reviewed the clinical records of all patients hospitalized in the Referent Surgical Department (RSD).

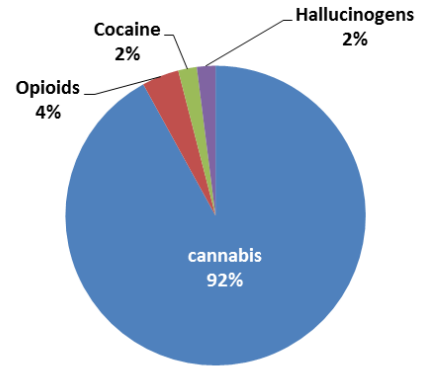
**Results** : According to PMSI data, among all pneumothorax stay (N= 3043), only 162 patients are drug users. The prevalence of substance use in pneumothorax diagnosis is about 5,75%.

From the RSD, 55 medical records were studied: Cannabis use was mentioned in 85% of cases. Clinical and epidemiological data are in the table below.

**Apical bullous disease (N = 21) and Emphysema (N = 21) are presents in 38% of cases.**



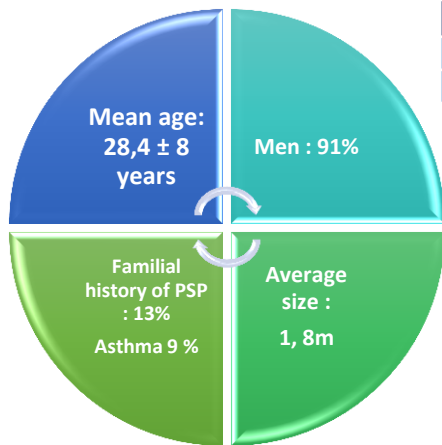
**Prevalence PAS in PSP (PMSI databases) = 5,75%**



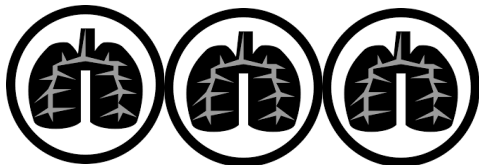
→ Psychoactives substances in PMSI databases

## PATIENTS IN SURGICAL DEPARTMENT (N = 55)

Smoking status	N	%
Tobacco	N = 48/55 average of 9.2 pack-year	87%
Cannabis	N = 47/55	85%
<b>Cannabis Daily consumption</b>	<b>N = 24</b>	<b>51%</b>
<5 joints/day	N = 21	47%
>5 joints/day	N = 3	6%



Primary spontaneous pneumothorax (PSP)	N = 49/55	89%
Complete PSP	N = 31	70%
Partial PSP	N = 12	30%
Not specified	N = 5	
First episode of PSP	N = 32	58%
Recurrence of PSP	N = 22	40%
<b>Number of recurrence of PSP</b>		
N = 1	N = 12	55%
N = 2	N = 2	9%
N = 3	N = 2	9%
N = 4	N = 1	4,5%
Not specified	N = 3	13%
<b>Surgical treatment</b>		
drainage	N = 17	31%
direct surgical procedure	N = 11	20%
Surgical procedure after drainage	N = 21	38%



**Conclusion** : PSP as adverse effect of marijuana, is still unknown, the recurrences of PSP (40%) and surgical procedure (58%) are particularly worrying. Shah recommended that an initial history of marijuana use should always be taken prior to any intervention: if imaging proven to have bullous lung disease, referral to a cardiothoracic chirurgical should be considered for a bullectomy and pleurodesis as definitive treatment. It seems to have an association between cannabis inhalation and apical bullous lung disease. A comprehensive illicit drug history is very important in patients presenting PSP.