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RESEARCH ARTICLE

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Detecting Hepatitis C in Psychiatric Patients is More Efficient in a Psychiatric Hospital than in an Ambulatory Psychiatric Unit

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ABSTRACT

Introduction: For a long time, the systematic proposed screening of hepatitis C in patients followed in psychiatric settings has been recalled through successive expert reports. In France, just over 5,000 patients a year are treated for hepatitis C while on the other side of the scale, 4,000 to 4,500 patients are contaminated or recontaminated, mainly by drug use, intravenous or nasal. The objective of eradicating hepatitis C set in France for 2025 will therefore not be achieved. The question is therefore to (re)find the undiagnosed or unfollowed patients whose number is estimated at 75,000. The question of screening more and better in psychiatric settings arises on a daily basis for all health care providers.

Methodology: Since 2017, the mobile hepatitis team of the Centre Hospitalier de Perpignan has been working in a psychiatric setting, first at the Centre Hospitalier Spécialisé (CHS) in Thuir and more recently at an ambulatory psychiatric unit called Centre Médico-Psychologique (CMP) in Perpignan. In this retrospective study, we wanted to compare the efficiency of our actions in these two different psychiatric sites, for the number of HCV screenings performed, patients positive for hepatitis C, patients treated and FIBROSCAN (mobile) performed. The frequency of actions was identical in both structures, half a day twice a month.

Results: The active queue of CHS was on average 1475 and that of CMP 1530 patients per year. The number of patients screened and treated in CHS was higher than those treated in CMP.

Conclusion: In our experience, screening psychiatric patients in CHS is more efficient than screening in CMP. This field study helps to clarify the recommendations published in the 2023 expert report.

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Introduction

For a long time, the systematic screening of hepatitis C in patients followed in psychiatric settings has been recalled through successive expert reports [1,2] or the latest report from the CNS (Conseil National du sida et des hépatites virales [3] which devotes a dedicated chapter to it. But, as Benjamin ROLLAND pointed out in a recent article, hepatitis C in psychiatric settings is a forgotten reservoir [4]. In France, just over 5000 patients are treated for hepatitis C each year, while on the other side of the scale, 4000 to 4500 patients are infected or recontaminated [5], mainly through drug use, intravenous or nasal. The objective of eradicating hepatitis C set in France by 2025 by the 2018 national public health plan will therefore not be achieved [6] and the 2030 target set by the WHO [7] is unlikely to be met. The question is therefore to (re) find the undiagnosed or unmonitored patients whose number is estimated at 75,000 [5]. Beyond the screening in prisons, in CSAPA and CAARUD, places traditionally targeted by screening programs, which can undoubtedly be optimized, the question of screening more and better in psychiatric settings is a daily issue for all health care providers.

Methodology

The Mobile Hepatitis Team (MHS) was established in 2013, following the publication of a collective INSERM expertise on reducing the risk of infection among drug users in 2011 [7], which recommended HCV testing for all drug users and the establishment of multidisciplinary clinics with individual screening for treatment and medical and social care. The primary objective of the EHM was to increase access to screening care and healing for our target population. The target population was drug addicts, (ex)prisoners, homeless people, precarious

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people, migrants and psychiatric patients. The HME is currently composed of a hepatologist, 3 nurses, a secretary, a social worker and a health mediator for an interdisciplinary approach. Resources include two specific cars, a fitted camper, TROD's, a GENEXPERT real-time measurement and viral load cell C and 3 mobile FIBROSCAN®. One hundred and two different medical-social structures are partners of the EMH: CSAPA, CAARUD, medical units in detention centres, CMP, mobile psychiatric teams, food aid associations or emergency accommodation. We offer all or part of our services to our partners. There are 16 services offered for a geoptical area of approximately 600,000 inhabitants in the south of France. All services are free for patients and our partners.

The services were organized in 4 successive stages for:
early detection and primary prevention

1. On-site TROD testing for HIV HBV HCV
2. Green wire: TROD and FIBROSCAN® in a camper van set up on outdoor sites.
3. BOUSSOLE, a dedicated site open 5 days a week for the reception, orientation and support of vulnerable people
4. Prevention information sessions for drug users in day care or residential facilities
5. Free primary care blood tests for patients without social insurance through PASS
6. Training of the staff of socio-medical institutions with semi-annual exchange days or on request and on site within the structures.
7. TROD performed by peers after specific training

For the diagnosis and assessment of fibrosis:

8. Social screening and diagnosis (using PICES, specific social score)
9. FIBROSCAN® mobile on site for indirect measurement of liver fibrosis on site
10. Advanced consultation of a hepatologist on site.

For access to treatment:

11. Quick and easy access to CPR with hepatologists, nurses, pharmacists, social workers, general practitioners, psychiatrists and addictologists.
12. Low-cost mobile phone loans to keep patients in touch with the HME

Follow-up during and after treatment

13. Individual therapeutic education sessions as part of a program authorized by the ARS (Regional Health Agency).
14. Group educational workshops (nurse, psychologist, sophrologist, nutritionist, pharmacist).
15. Expert patient support through peer education program
16. Hospitalization of 1-day cirrhosis patients

FIBROSCAN is a physical pulse elastometry technique that uses hepatic stiffness to measure liver elasticity to detect fibrosis and cirrhosis of the liver. This was a non-invasive test with rapid results, combined with TROD and real-time viral load measurement. It is carried out by a nurse trained in the framework of a cooperation protocol (HSPT-Loi article 51). HCV/ HIV/ HBV TRODs are an alternative to serological blood tests. The nurse can do this in 20 minutes on a digital puncture to get immediate results and can repeat for HCV status as needed. Each HME partner can choose and access some or all of our services. They choose only the services they need. Our services have not replaced existing services, but only supplemented them.

We also had specific services: PSY-C for psychiatric patients, DEPIST C PHARMA for pharmacists, HOPITAL ZERO HEPATITIS for hospitalized patients, PRISON ZERO HEPATITIS for inmates, as well as immersion sessions for other hepatitis teams and community, regional and European actions. We have cured more than 1,000 HCV patients in 10 years [8-12], including psychiatric patients [13-15].

Medical and psychological centres (MPC) are ambulatory and coordination units for open psychiatric care, offering prevention, diagnosis, outpatient care and home interventions [16,17]. With a great diversity in terms of size, means, ways of working or positioning themselves among the other players in mental health care, these 1,780 centres in France, at the heart of ambulatory psychiatry, are experiencing a sharp increase in demand for care: In 30 years, this outpatient facility has welcomed one million additional patients, mostly in CMP. The Centre médico-psychologique (CMP) is a public health care facility that provides medical, psychological and social counselling to any person with mental health problems. Each CMP is composed of a multidisciplinary team that includes both caregivers (psychiatrists, clinical psychologists, nurses, speech therapists, psychomotricians...) and social workers (social service assistants, educators...). Their principles of proximity, multidisciplinarity and accessibility may be compromised due to the scarcity of available professionals or difficulties in coordinating them or responding to emergencies and unscheduled care.

Our team has already published the results of a screening systematically proposed since 2017 at the Thuir Hospital, the only public mental health institution in the department of Pyrénées-Orientales [14,15]. To extend our action, we have developed a partnership with one of the CMP, located in the city center of Perpignan and having the largest active queue of all the CMP of the department. We have set up bi-monthly TROD screening permanences for viral hepatitis B, C and HIV with a real-time C viral load measurement by GENEXPERT* (CEPHEID) system associated with FIBROSCAN* (ECHOSENS) screening for hepatic fibrosis. Standard venous screening was also offered during initial and follow-up visits by PMC psychiatrists, nurses and psychologists. We are presenting results from 2021 to exclude the effect of COVID.

Results

Table 1 details the results of the screening at the hospital compared to the screening carried out in CMP. The active queue of the CHS was on average 1475 and that of the CMP 1530 patients per year. It should be noted that of the 4 patients treated in CMP in 2021, two had been screened and diagnosed in the Psychiatric Hospital Center.

	2021			2022			2023			2024		
	FIBROSCAN	VL+	treated	FIBROSCAN	VL+	treated	FIBROSCAN	VL+	treated	FIBROSCAN	VL+	treated
CHS	170	5 of 21	2	143	10 of 38	4	157	7 of 42	6	172	10 of 47	4
CMP	ND	ND	ND	4	5	4	4	0 sur 2	0	86	1	1

VL+ : HCV positive viral load
ND : not determined

Discussion

Our study is the first French study published on a screening organized over a long period of time in CMP. In our experience at the level of a department, screening and management of psychiatric patients in a hospital is more efficient than in a CMP. The funding of ADAs has often been presented as a brake on the treatment of hepatitis C in psychiatric hospitals, even if solutions exist as in Occitanie [18]. This is not an obstacle in outpatient medicine. The absence of new CMP-positive patients is explained by a difference in active queues with fewer active or recent drug user patients. If patients already screened (and treated) during a previous stay in hospital or in prison are excluded from the active CMP queue, the number of new patients is low. From these negative results, we did not extend our action to the other CMP of the department, preferring to strengthen our nursing and social presence in the CSAPA, CAARUD and the psychiatric hospital.

Conclusion

The recommendations exist [2,3] and are detailed in annexes 1 and 2 but are not applied on a daily basis, probably due to lack of dedicated resources and consultation between caregivers. Screening is often offered in a quasi-systematic way but the care path remains incomplete while the psychiatric sector, particularly in hospitalization, lends itself to targeted micro-elimination projects.

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Appendix 1: 2014 Dhumeaux Report Recommendations Chapter 13 [2]

1. Raise awareness among general practitioners and psychiatrists about the problems of hepatitis B and C, due to the frequency of psychiatric manifestations during viral infections B and C.
2. To promote and develop the screening of hepatitis virusBetCleans patients attending psychiatric institutions and users of psychoactive substances.
3. Encourage and promote hepatitis B vaccination among patients in psychiatric facilities and users of psychoactive substances.
4. Systematize and standardize the way in which psychiatric disorders, addiction problems and suicidal risk are assessed before, during and after antiviral treatment including interferon, especially in patients with hepatitis C.
5. Update the therapeutic recommendations of AFSSAPS (current ANSM), including the risk factors for mental disorders (sleep disorders, stressful events, unsupportive

environment).
6. Improving the coordination of development care by promoting coherent links between general practitioners, hepatologists, psychiatrists and addiction specialists.
7. Support patient associations and develop listening platforms regulated by mental health professionals.
8. Promote research on the mechanisms of psychiatric disorders and cognitive impairment in patients with hepatitis C.

Annex 2: psychiatric recommendations from the CNS 2023 report [3]

Screening

In Hospital

In full-time hospitalization, the initial clinical assessment is usually carried out by the general practitioner somatist or multidisciplinary physician and serological screenings are offered or even systemized at the patient's entry, depending on the institution. The most common tests offered are HCV, HBV, syphilis and HIV (with patient consent for HIV). Some local organizations offer screening before admission to psychiatric hospital, for example through the emergency rooms of general hospitals. May also be organized in full-time hospitalization unit (UHTP) days of screening by TROD by health care teams, in addition to serological screening, so as to strengthen prevention messages. Downstream, in the medical and social institutions hosting people with psychiatric disorders, HCV, HBV, syphilis and HIV serological screenings are requested, see systematized.

Ambulatory

In outpatient facilities (developed as alternatives to full-time psychiatric hospitalization), or about 80% of the population under care, screening is insufficiently practiced. Serological screenings are prescribed by psychiatrists, on a case-by-case basis in the Centre Médico-Psychologique (CMP), the Day Hospital (HDJ) and the Centre d'Accueil Thérapeutique à Temps Partiel (CATTP). Information and awareness of screening, simplified management and treatment for hepatitis C is very inadequate. Screening by TROD exists but the structures are numerous and distributed throughout the territory, the number of screenings carried out remains low. They are most often carried out by dedicated prevention teams, and still too little at the initiative of caregivers working in these structures.

Screening takes place in a more systematic way within the Permanences d'Accès aux Soins de Santé en milieu Psychiatrique (PASS Psy) and at the initiative of professionals from the Teams de Liaison et de Soins en Addictologie (ELSA), more aware because it welcomes users with addictive behaviors. All the devices «to go towards», such as the professionals of the Mobile Teams Précarité Psychiatrie (EMPP), for example, should also offer screening more widely to people under care, in support of the PASS Psy or by their treating physicians (when they have declared one and effectively follow up with them). In addition, a large proportion of people with psychiatric disorders have not declared a attending physician or are not regularly followed by their attending physician. The role of the State Graduate Nurse (IDE) in psychiatry, in its role of identifying and detecting somatic diseases, should be promoted and supported. The very recent role of Advanced Practice Nurses (IPA) should be able to improve HCV prevention and screening actions. The effort must be concentrated on more systematic screening, through awareness and information, both among users and medical professionals.

If HCV Serology is Positive

In people with psychiatric disorders, it may be more complex for HCV-positive serology to perform a viremia (HCV PCR) to identify whether the person should be treated or not. The patient may have been released from a brief hospitalization or missed the next outpatient follow-up appointment.

Linkage to Care

Simplified Route – Route Coordinated with Hepatogastroenterology Specialists

The simplified course is to be encouraged and promoted, within authorized establishments in psychiatry, by an increase in skills of general practitioners or polyvalent doctors called «somaticians» practicing there, and each time the organization, the human and material resources are combined. These organizations guarantee adherence to care and follow-up in an environment familiar to the patient and in conjunction with psychiatric medical teams. This requires a partnership with the hepato-gastroenterologists of the territory: appointments without queues, telephone notices. A majority of patients have comorbidity factors: overweight, even obesity, hypertension, diabetes for which specialist advice is required but should not be an obstacle to the implementation of a simplified path guaranteeing compliance with care and treatment. Whenever this can be set up, the remote notice (teleconsultation) with the hepatologist will also avoid possible interruptions of care due to the patient or the lack of accompanying persons. Indeed, the current tensions on the nursing staff are degrading the quality of the somatic follow-up due to lack of escorts to specialized partner structures.

HCV PCR (viral load)

The time taken to obtain HCV PCR from laboratories can be long, sometimes exceeding the average length of psychiatric hospital stay. The vast majority of psychiatric institutions outsource biological sampling to partner hospital or private laboratories. The systematic alert by laboratory professionals, in case of positive PCR, to prescribing somatic generalists or psychiatrists would facilitate the implementation of simplified management, or coordinated with specialists (depending on patient profile).

The acquisition of a GeneXpert® can be considered, in some cases, as a solution allowing for the simplified or coordinated route to be implemented within an hour.

Assessment of Fibrosis

The use or purchase of a Fibroscan® should be recommended within licensed psychiatric institutions (as part of the acquisition and modernization of psychiatric equipment). The use of FIB-

4 by practitioners is not recommended in psychiatry because disturbances of liver balance are frequent (polymedication and comorbidities in psychiatry). Although FIB-4 provides a quick indicator, it is not suitable for the population concerned.

In addition to participating in the screening of patients with psychiatric disorders (routine HCV serology for every patient at least once a lifetime, or once a year if the patient has current risk factors, and prescription of a viral load in case of positive HCV serology), the psychiatrist, who is often the only medical referent for patients with psychiatric disorders, has an important role to play throughout the treatment of hepatitis C. He or she can inform their patient about the potentially serious consequences of hepatitis C (hepatic and non-hepatic) as well as the absolute need to treat it. He or she may prescribe direct-acting antiviral treatment (DAA) as part of the simplified route if experienced, or refer his or her patient to the somatic physician or attending physician. The psychiatrist can assist the treating physician/somatist at all stages of hepatitis C treatment:
- knowledge of the patient's current and lifetime risk factors, history of HCV screening (as well as previous treatments), but also HBV and HIV
- for the choice of the most suitable AAD for the psychotropic treatments that he prescribes to his patient
- optimizing patient adherence to AAD, for example by addressing the topic at each psychiatric appointment
- during the biological follow-up at 12 weeks post-treatment, which may be more random in people with psychiatric disorders (again, informing of the usefulness of this biological examination)
- and, above all, by providing personalized information that is understandable and acceptable to the patient, helping to prevent HCV reinfections

Other Stakeholders

Advanced practice nurses (IPA), such as the "nurse navigator" in Spain (84) will be able to participate actively at all levels of the fight against hepatitis C among people with psychiatric disorders:
- screening, in hospital and out-patient care within the different care structures
- follow-up and personalized support (including necessary biological tests, viral load upon receipt of positive serology, assessment of the degree of fibrosis, post-treatment follow-up, etc.) for each patient with HCV positive serology
- Therapeutic education program: peer-caregivers also have a role to play in this fight against hepatitis C, either within the groups of ETP, or in individual or group accompaniment within hospital institutions or ambulatory structures.

Raising awareness of HCV among user associations and user family associations is also important. Information materials (brochures, posters, flyers, etc.) may be useful.

Treatment and Financing

Failure to follow AAD treatment in people with psychiatric disorders may sometimes be feared. Medical follow-up and treatment support can be strengthened, but this may not be sufficient. Nevertheless, everything must be done to improve compliance with treatment. The initiation of treatment during hospitalization, guaranteeing increased compliance, has so far run up against the funding model for public psychiatric establishments and the budget envelopes of hospital pharmacies that cannot afford these treatment costs. In the vast majority of situations, treatment is delayed upon patient discharge. The regulations must change, in particular with the possibility for the hospital establishment to be reimbursed by the Health Insurance the costs of medicines prescribed during hospitalization, in accordance with the legislation which allows it for private institutions. Another possibility is to practice the retrocession by the pharmacy of internal use (PUI) for establishments, but this imposes procedures often difficult to implement. Every effort must be made to simplify the possible delivery of ADAs by the institutions' PUIs, regardless of the number of patients to be treated, thus allowing treatment to start as soon as the diagnosis is made, facilitating the simplified and coordinated route. However, not all psychiatrists are aware of the existence of new treatments for DAA that are effective, safe and improve quality of life, including in patients with psychiatric disorders. It is therefore important to inform all psychiatrists, so that they can play an active role in the fight against hepatitis C with their patients.

Annexe 3: Possibility of funding DAAs

Pursuant to the provisions of article R. 162-31-2 of the Social Security Code in its version prior to the aforementioned Decree of 29 September 2021, are covered by the compulsory social security schemes in addition to the packages provided for in article R. 162-31-1 of the same code in its version prior to the aforementioned Decree of 29 September 2021, the cost of dispensing medication necessary for the treatment of a condition other than that motivating the hospitalization and occurring during the hospitalization, or necessary for the treatment of a pre-existing pathology already under medical management.
II. - In order to obtain reimbursement of the costs associated with dispensing the medicines mentioned in I, the health institution shall send the following documents to the fund manager in addition to the billing slip: Medical prescription and the copy of the supplier's invoice on which the purchase price including all taxes of the drug must be shown.