

# Diagnostic et transmission des maladies à prions

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## Quintessence

- Les encéphalopathies spongiformes transmissibles constituent un groupe hétérogène de maladies ayant pour corrélat pathologique commun les prions.
- En Suisse, la maladie de Creutzfeldt-Jakob sporadique est la forme la plus fréquente; la nouvelle variante n'a encore jamais été observée.
- Les prions sont transmissibles, principalement par les produits sanguins, les transplants tissulaires et le matériel chirurgical.
- Le diagnostic de suspicion d'une maladie de Creutzfeldt-Jakob est posé, chez un sujet vivant, à partir du tableau clinique typique d'une part et de l'IRM cérébrale, de l'analyse du liquide céphalo-rachidien et de l'EKG d'autre part.
- La déclaration obligatoire des cas cliniques suspects permet de prendre des mesures pour protéger la population et de vérifier leur efficacité. Les principales mesures sont le contrôle et le rappel des produits sanguins ainsi que l'évaluation des techniques de stérilisation.

## Contexte

Les maladies à prions ou encéphalopathies spongiformes transmissibles (EST) sont des maladies provoquées par des prions (particules protéiques infectieuses), non curables et toujours fatales. Chez l'homme, elles se présentent sous trois formes: familiale, sporadique et acquise.

Les formes familiales sont la maladie de Creutzfeldt-Jakob familiale (fMCJ), l'insomnie fatale familiale (IFF) et le syndrome de Gerstmann-Sträussler-Scheinker (GSS).

La forme la plus fréquente est la forme sporadique de la maladie de Creutzfeldt-Jakob (sMCJ).

La nouvelle variante (vMCJ) et la forme iatrogène de MCJ (iMCJ) comptent parmi les maladies à prions acquises. La transmission des prions se fait de l'homme ou de l'animal à l'homme dans la iMCJ, et de bœufs atteints d'encéphalopathie spongiforme bovine (ESB) à l'homme, par voie intestinale, dans la vMCJ. En raison de la transmissibilité, la déclaration des cas cliniques suspects est obligatoire, afin que des mesures de protection de la population puissent être prises. Le diagnostic précoce est donc important pour la personne touchée et ses proches, mais il présente aussi un intérêt général.



Simon Jung

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## Evolution clinique

### MCJ sporadique, iatrogène et familiale

Avec 1 à 2 cas par an pour 1 million d'habitants, la sMCJ est la forme la plus fréquente. Elle survient principalement chez les personnes d'un certain âge (65 ans en moyenne) et se distingue des autres démences par une évolution rapide (durée: 4,5 à 7 mois). Même si toutes les zones cérébrales peuvent finalement être touchées et que par conséquent les symptômes possibles sont très variés, ceux-ci sont plus ou moins fréquents et dépendent du stade de la maladie (voir tabl. 1 [2]). Les différences génotypiques sur le codon 129 de la protéine prionique entraînent une variabilité supplémentaire. La iMCJ (thorons les cas de vMCJ) et la fMCJ ne se distinguent pas de la sMCJ pour ce qui est de la clinique et de l'évolution.

### Variante de la MCJ

A la différence de la sMCJ, la vMCJ est une forme rare, qui se manifeste surtout chez les jeunes adultes (28 ans en moyenne). L'évolution, un peu plus longue (14 mois), commence typiquement par des symptômes psychiatriques (dépression, angoisses, apathie, délire, etc.) ou des troubles de la sensibilité (généralement sous forme de dysesthésies douloureuses des extrémités). Le tableau se rapproche de celui de la sMCJ au bout de quelques mois.

## Examens complémentaires

### Electroencéphalogramme (EEG)

L'EKG confirme le diagnostic de sMCJ quand il montre des complexes d'ondes périodiques biphasiques ou triphasiques [1], bien que cette preuve ne soit pas spécifique [2]. Dans la vMCJ, l'EKG ne présente le plus souvent que des modifications générales non spécifiques.

### Liquide céphalo-rachidien

Les paramètres de routine (nombre de cellules, protéines, glucose) sont habituellement normaux. L'élévation des protéines 14-3-3, tau et S100b ainsi que de l'enzyme neurone-spécifique est caractéristique de la sMCJ [3, 4], mais elle n'est pas non plus spécifique; elle reflète avant tout la lyse neuronale. Dans un travail actuel sur la valeur des analyses du LCR dans la sMCJ, la sensibilité était de 86% pour la protéine 14-3-3, de 81% pour la protéine tau et de 65% pour la protéine S100b [4]. En tant que marqueur plus singulier, la protéine 14-3-3 présente donc la sensibilité la plus élevée, sensibi-

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