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## Introduction

- ❖ Several studies suggest that HCV infection is an additional risk factor for the development of diabetes.
- ❖ The objective of this study was to determine the prevalence and factors associated with diabetes in patients with hepatitis C virus (HCV) in Benin's largest public hospital.

## Methods

This was a case-control, descriptive and analytical study conducted from January 1, 2012 to April 30, 2018 (retrospective phase) and from May 1 to October 31, 2018 (prospective phase). It involved patients of the Clinique universitaire d'Hépatogastroentérologie de Cotonou, aged 18 years and over, with or without HCV (cases) (controls). Data entry was made in the Epidata 3.1 software. The analysis was performed with the statistical software SPSS 21. For comparisons, the Chi2 test was used, and the difference was considered significant for  $p < 0.05$ .

## Results

- ❖ A total of 80 cases and 80 controls were recruited; the average age was 54.5 years  $\pm$  13.8 years with cases older than controls (60.2 years versus 48.7 years,  $p < 0.001$ ). There was a female predominance at 56.9%, with no significant difference between the two groups ( $p = 0.151$ ).

- ❖ The prevalence of diabetes was 25% (20/80) in cases compared to 8.8% (7/80) in controls, with a statistically significant difference ( $p = 0.006$ ). Cf figure 1.

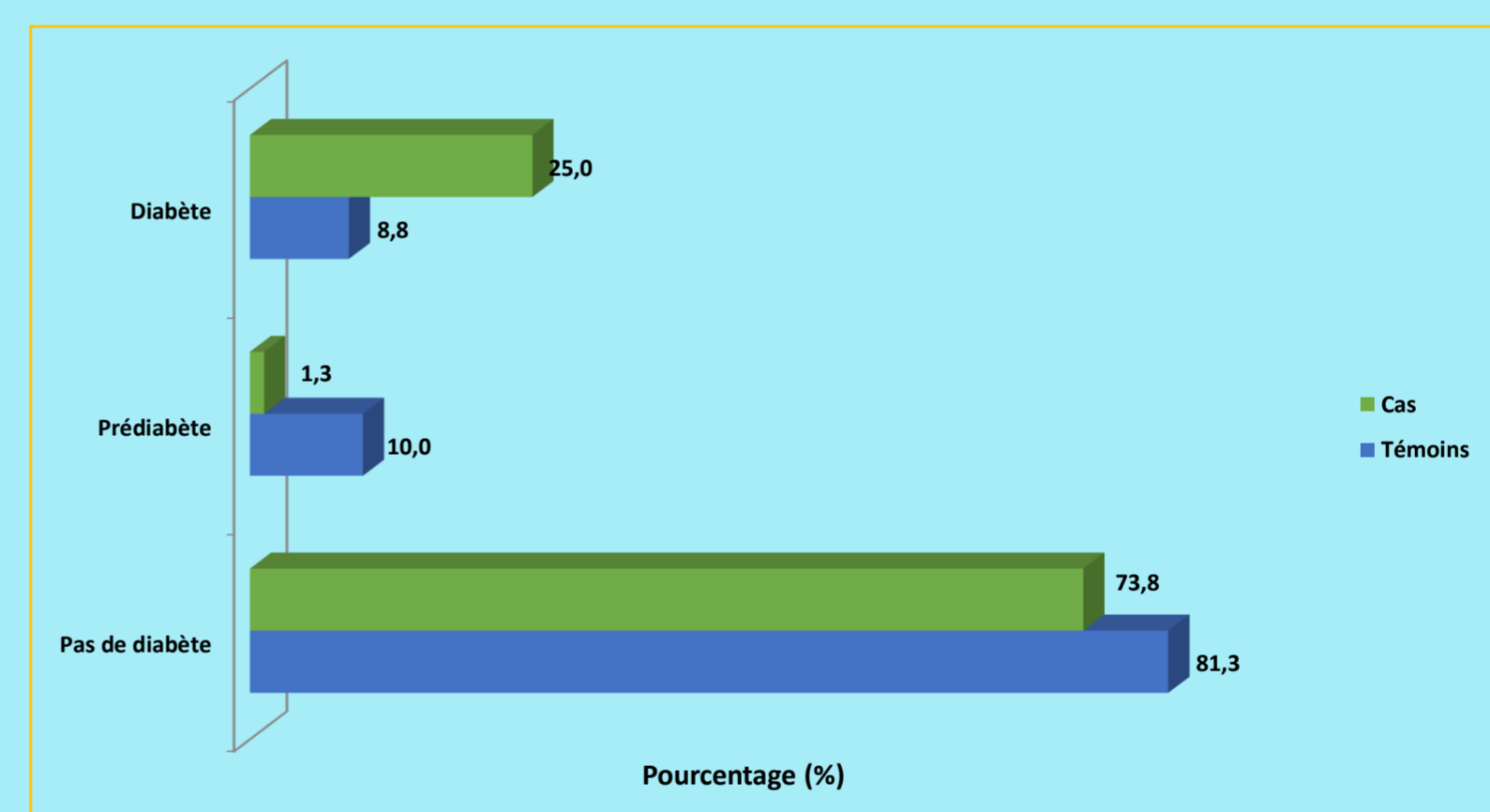


Figure 1 : Prevalence of diabetes in cases and controls

- ❖ The associated factors were age greater than 60 years (17/51) than for those under 60 years of age (33.3% vs 10.3%,  $p = 0.022$ ), the existence of cytolysis (30.9% vs 12%,  $p = 0.07$  for ALAT, 32.1% vs 8.3%,  $p = 0.024$  for ASAT). Cf table I and II.

Table I: Age and diabetes in cases

|         | No diabetes |      | Diabetes |      | Total |     | OR   | CI <sub>95%</sub> | p     |
|---------|-------------|------|----------|------|-------|-----|------|-------------------|-------|
|         | n           | %    | n        | %    | N     | %   |      |                   |       |
| Age     |             |      |          |      |       |     | 4.33 | [1.14-16.37]      | 0.023 |
| [18-59] | 26          | 89.7 | 3        | 10.3 | 29    | 100 |      |                   |       |
| [60-84] | 34          | 66.7 | 17       | 33.3 | 51    | 100 | 0.23 | [0.06-0.87]       | 0.023 |
| Total   | 60          | 75   | 20       | 25   | 80    | 100 |      |                   |       |

Table II: Aminotransferases and diabetes in cases

|      | No diabetes |      | Diabetes |      | Total |     | OR   | CI <sub>95%</sub> | p     |
|------|-------------|------|----------|------|-------|-----|------|-------------------|-------|
|      | n           | %    | n        | %    | n     | %   |      |                   |       |
| ALAT |             |      |          |      |       |     | 0.30 | [0.08-1.15]       | 0.07  |
| ≤40  | 22          | 88   | 3        | 12   | 25    | 100 |      |                   |       |
| >40  | 38          | 69.1 | 17       | 30.9 | 55    | 100 | 3    |                   |       |
| ASAT |             |      |          |      |       |     | 0.19 | [0.040-0.90]      | 0.025 |
| ≤40  | 22          | 91.7 | 2        | 8.3  | 24    | 100 |      |                   |       |
| >40  | 38          | 67.9 | 18       | 32.1 | 56    | 100 | 5    |                   |       |

- ❖ Factors such as sex ( $p = 0.182$ ), body mass index ( $p = 0.289$ ), blood pressure ( $p = 0.260$ ), viral genotype ( $p = 0.433$ ), and platelet level ( $p = 0.734$ ) were not associated.

## Conclusion

- ❖ The prevalence of diabetes was higher among HCV carriers than among controls. This is particularly true when the subjects are elderly or have cytolysis.
- ❖ However, a larger study is needed to confirm these data.