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Pheochromocytoma Discovered Incidentally at the Sylvanus Olympio University Hospital in Lomé (Togo)

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Abstract: Introduction: The diagnosis of pheocytochroma is often late compared to the appearance of symptoms, sources of morbidity and even mortality. However, pheochromocytoma can be discovered incidentally during a pathology unrelated to the tumor. Case report: We report a case revealed by acute viral hepatitis B. It's a young subject hospitalized in the internal medicine department of the Sylvanus OlympioTeaching Hospital in Lome. This is a 22-year-old patient, professional driver with no known pathological history, admitted for headache, muscle aches and asthenia associated with abdominal pain and postprandial vomiting in a febrile context. In admission, clinical examination revealed high blood pressure (BP=190/140mmHg), a deterioration in general condition, jaundice and painful hepatomegaly. The biological assessment revealed a cholestatic cytolysis syndrome (AST: 48.24N, ALT: 42.23N, PAL: 1.06N, Gamma GT: 3.84N, total bilirubin: 31.4N, direct bilirubin: 89, 6N). The serological assessment revealed acute viral hepatitis B (HbsAg positive and anti-Hbc antibodies type IgM positive, HIV and hepatitis C serologies negative). An abdominal ultrasound noted homogeneous hepatomegaly without dilatation of the portal trunk or bile ducts. Faced with this hypertension in a 22-year-old, secondary hypertension was considered and abdominal CT revealed a pheochromocytoma. Conclusion: Pheochromocytoma is not uncommon in our circles. It should always be considered in the present of high blood pressing in young subject.

Keywords: Viral Hepatitis B, Pheochromocytoma, Hypertension, Young Subject, Lomé (Togo)

1. Introduction

Pheochromocytoma is an often benign tumor of the chromaffin cells of the adrenal medulla, manifested by the intermittent or continuous secretion of catecholamine which leads to permanent high blood pressure, paroxysmal vasomotor disorders, accompanied by headaches, palpitations and often bouts of sweating [1]. This clinical symptomatology, although suggestive, is not always complete [2]. It is a rare endocrine tumor, rarely reported in Africa [2-4]. It is mainly found in young or middle-aged patients [1]. The diagnosis is often late compared to the appearance of symptoms, sources of morbidity and even mortality [5]. However, pheochromocytoma can be discovered incidentally during a pathology unrelated to the tumor [6]. We report a case revealed by acute viral hepatitis B.

2. Observation

This is a 22-year-old patient, bus driver, admitted on February 4, 2018 to the internal medicine department (Medicine B) for headaches, aches and asthenia associated with abdominal pain and postprandial vomiting lasting for three weeks in a feverish context, requiring treatment in two local health facilities without success. In his history, he is neither hypertensive nor diabetic. There is also no family notion of high blood pressure and diabetes. The clinical examination upon admission noted a

normal temperature, blood pressure of 190/140mmHg (right arm) and 170/130mmHg (left arm). The general condition was impaired with jaundice. The abdomen was painful on palpation of the right hypochondrium with hepatomegaly. The rest of the examination, like the examination of the respiratory, urogenital and nervous systems, spleno-nodal systems, was normal. The paraclinical examinations carried out noted:

A negative thick smear, blood sugar: 1.35g/l, urea: 0.54g/l, serum creatinine: 16 mg/l, AST: 1689u/l (48.94N), AST: 1833u/l (49.23N), a PAL: 234u/l (1.06N), a Gamma GT: 165u/l (3.83N), a total bilirubin: 314.82mg/l (31.48N), a direct bilirubin: 224.16mg/l (89.66N), prothrombin level: 85%. A blood count: hyperleukocytosis at 11230 GB/mm^3 with neutrophilic polynucleosis (7210/mm^3). A positive Hbs antigen with a positive IgM type anti-Hbc antibody assay. Negative retroviral serology and hepatitis C serology. An abdominal ultrasound: homogeneous hepatomegaly without dilatation of the portal trunk or the bile ducts. The diagnosis of acute viral hepatitis B was made. Faced with permanent high blood pressure interspersed with paroxysms in this young subject, we considered secondary hypertension and an abdominal CT scan sagittal cut (figure 1) and axial section (figure 2) looking for a pheochromocytoma was requested. It revealed a left adrenal tumor, well rounded, with regular and clear contours, moderately enhanced by contrast and measuring 60/47 mm, suggesting a pheochromocytoma. The determination of plasma or urinary methoxylated derivatives was not possible due to lack of technical facilities, as was the determination of ACTH. An electrocardiogram (ECG) showed sinus tachycardia. There was no sign of ischemia or hypertrophy (ventricular and/or atrial). A transthoracic ultrasound to look for left ventricular dysfunction could not be performed. The patient was awaiting surgery, but was ultimately lost to follow-up.

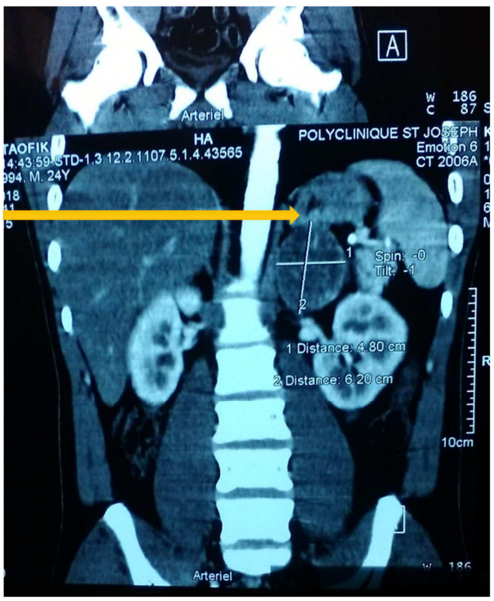

Figure 1. *Abdominal CT sagital cut with contrast Left adrenal tumor, well rounded, with regular and clear contours, moderately enhanced by contrast and measuring 60/47mm (yellow arrow): appearance suggestive of a pheochromocytoma.*

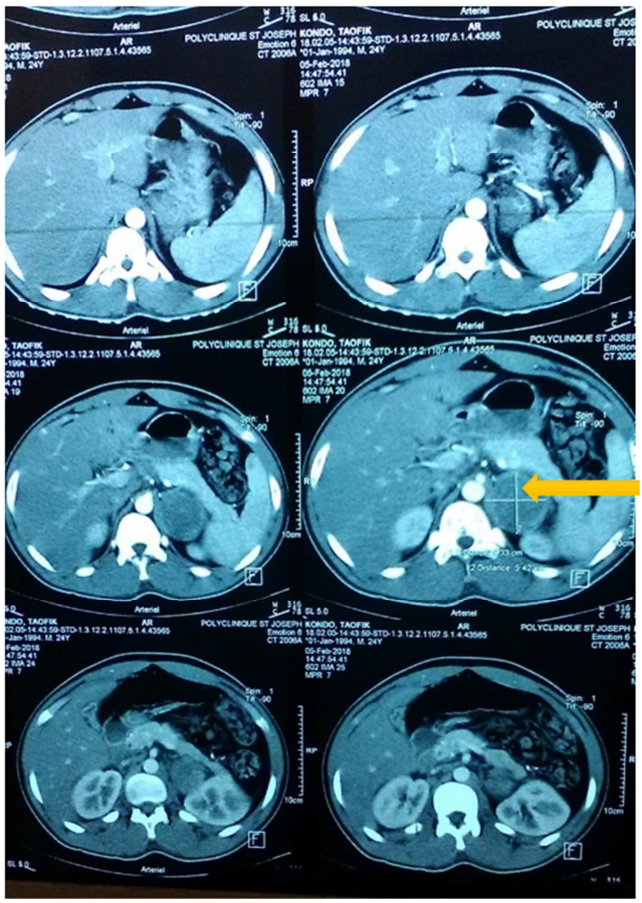

Figure 2. *Abdominal CT Axial Section with contrast Left adrenal tumor, well rounded, with regular and clear contours, moderately enhanced by contrast and measuring 60/47mm (yellow arrow): appearance suggestive of a pheochromocytoma.*

3. Discussion

This work allowed us to describe an observation concerning a probable pheochromocytoma. Despite the absence of the dosage of plasma or urinary methoxylated derivatives, and the anatomopathological data, we retained this diagnosis on the clinical and CT basis. This is a case discovered accidentally in a 22-year-old subject, hospitalized for acute viral hepatitis B.

The epidemiology of pheochromocytomas is difficult to establish [6]. We know that these are rare pathologies in the world with an estimated incidence of one new case per 100,000 people per year [6]. Indeed, few cases of pheochromocytoma have been reported on the African continent since the 1990s. Three cases were reported in Kinshasa between 1973 and 1983 [2], one case in Lomé in 1990 [7] one case in Rabat in 2005 [8]; three cases in Ouagadougou between January 2008 and December 2013 [3], one case in Bamako in 2014 [9], two cases in Rabat in 2014 [10], and one case in Oudja (Morocco) in 2018 [4]. But these frequencies would certainly be underestimated since not only is the clinical symptomatology suggestive of the tumor not always complete, but also additional examinations confirming the diagnosis are not always available in certain

settings. Our patient was 22 years old. Indeed, pheochromocytoma is mainly the prerogative of adolescents and young adults [1, 3, 4, 9, 10]. However, it can also be seen in young children, especially in its familial form [7]. Sex is reported differently depending on the work [3, 4, 7-10]. This tumor is not linked to sex.

Pheochromocytoma was discovered incidentally in our patient who was hospitalized for acute viral hepatitis B. The ways in which this tumor is revealed outside of the classic symptomatology vary from one author to another. Several clinical cases of this little-recognized tumor discovered intra- or postoperatively have been described in patients operated on for another pathology [4, 11-14]. In the observation of Abderrahim et al, the pheochromocytoma was revealed by a coronary syndrome [15]. In those of Sagna et al, it was revealed in one patient by diabetic ketosis [16]. Incidental findings during CT or magnetic resonance imaging of the abdomen for symptomatology unrelated to the tumor have been reported [17, 18]. This may indicate that this tumor is not as rare as previously thought; she would be underdiagnosed. The acute viral hepatitis B revealed in our patient has not been reported to our knowledge in the literature, especially since this infection is endemic in sub-Saharan Africa [19, 20]. However, a case of hepatic cytolysis of non-viral origin, revealing an adrenal ganglioneuroma, was reported in Morocco in 2013 [21].

The classic evocative triad (Menard's triad) combines paroxysmal episodes of sweating, palpitations and headaches [8]. This triad is associated with paroxysmal or permanent hypertension [1]. In practice, these signs are sometimes absent or are only rarely present simultaneously due to the secretion of catecholamines in variable and sometimes discontinuous quantities by the tumor [8, 22]. This is the case of our patient who only presented with headaches and permanent high blood pressure interspersed with paroxysms. Sometimes the symptoms are not very specific, which explains the delays in diagnosis [23]. This demonstrates the importance of systematically searching for pheochromocytoma in the face of high blood pressure in a young subject.

In our observation, it was difficult for us to say whether it was a familial (heredity) or sporadic form of pheochromocytoma due to lack of exploration by the patient and his family. Indeed, the search for a genetic cause is systematically recommended in all patients suffering from pheochromocytoma (or paraganglioma) whatever the age or type of tumor, due to the high percentage of mutations identified in patients having an apparently sporadic presentation [24, 25]. The presence of a mutation may determine the subsequent monitoring of the patient but also of their family members who may benefit from family screening and then, in the event of a mutation found, from preclinical screening for possible tumors. Since 1990, several susceptibility genes have been identified, including VHL (Von Hippel Lindau syndrome) [26], NF1 (neurofibromatosis type 1 or Recklinghausen disease [27], and RET (MEN-2: multiple endocrine neoplasia type 2) [28], are responsible for syndromic forms.

4. Conclusion

Pheochromocytoma would be underdiagnosed because its modes of revelation are variable and can be nonspecific. We believe that it is justified to systematically look for it in a young subject with arterial hypertension. Furthermore, health insurance for all and an improvement in our technical platform, notably the availability of the dosage of plasma/urinary methoxylated derivatives, and CT scanning in all regions of our country will allow diagnosis and better management of this tumor.

Contributions of Authors

Dr Djalogue L: Analysis, interpretation of data, writing of the manuscript and submission to the scientific journal,
Nemi KD, Mossi KE, Tchamdja T, Djagadou KA: Correction of the manuscrit; Balaka A, Djibril MA: managing.

Conflicts of Interest

The authors declare no conflicts of interest.

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