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Classic Hodgkinian Lymphoma: Clinical Aspects of 236cases with a Review of the Literature

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Summary

Hodgkin's disease is a malignant hemopathy characterized by the presence of Reed-Sternberg cells, within a heterogeneous inflammatory reaction cell environment (WHO 2016). Our work focuses on 236 patients with classical Hodgkin's lymphoma collected in the pathology anatomy department of the Mohammed VI University Hospital of Marrakech, over a period of 9 years from January 2007 to December 2017. The average age of our patients was 32 years with extremes of age ranging from 9 to 71 years. The distribution of patients by age shows a male predominance with a sex ratio of 1.2. The main reason for consultation is chronic superficial polyadenopathy (85.4%). The anatomopathological study showed a destruction of the ganglionic architecture with the presence of typical Reed Sternberg cell, Reed Sternberg-like in a cell bottom adequate 55.5% of cases have benefited from an immunohistochemical study. The patient profile of our series approaches the epidemiological and clinical profile of the patients studied in the literature.

Introduction

Hodgkin's disease is a malignant hemopathy characterized by the presence of Reed-Sternberg cells, within a heterogeneous inflammatory reaction cell environment (WHO 2016). The Reed-Sternberg cell was described by Carl Sternberg in 1898 and Dorothy Reed in 1902, hence its name. Thomas Hodgkin had initiated in 1832 the first macroscopic description of the disease that now bears his name (painless enlargement of the ganglia and the spleen) [1,2].

-Two histopathological entities:

- Lumpy nodular Hodgkin lymphoma
- Classic Hodgkin lymphoma

The purpose of our work is to study the anatomo-clinical, and Hodgkin's disease.

Material and methods

Our work focuses on 236 patients with classical Hodgkin's lymphoma collected in the pathology anatomy department of Mohammed VI Hospital, Marrakech, over a period of 9 years from January 2007 to December 2017. We included in our study, all patients with Hodgkin's lymphoma, confirmed by the pathological study of a lymph node biopsy or osteomedullary biopsy, based on the histological classification of lymphomas from the World Health Organization WHO 2016. From the anatomopathological data sheets, we collected the following data: age, gender, localization of lymphadenopathy and extension assessment.

Results

The average age of our patients was 32 years old with extreme ages ranging from 9 to 71 years old. The distribution of patients by age shows a male predominance with 129 men (54.7%) and 107 women (45.3%). The sex ratio is 1.2 (Figure 1).

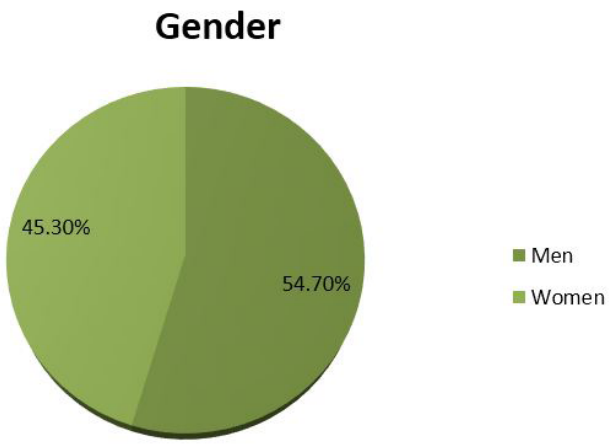

Figure 1: Distribution by gender.

The primary reason for consultation was chronic superficial polyadenopathy (85.4%), and clinical examination revealed peripheral lymphadenopathy in 95.7% of cases. Osteomedullary biopsy was positive in 16% of cases. The anatomopathological diagnosis was made on lymph node biopsy in 99.6% of cases, osteomedullary biopsy in 0.4% (Figure 2), showing a destruction of the ganglionic architecture with presence of large lobed cell, bi- or multinucleate with large acidophilic nucleolus in each nuclear lobe giving the mirror-like appearance of the cell, and abundant amphophilic cytoplasm. It is the typical Reed Sternberg cells, or other types of atypical Hodgkin cells in an adequate stroma reaction with a heterogeneous population consisting of small lymphocytes, plasma cells, large lymphoid cells, histiocytes, fibroblasts, collagen fibers (Figures 3,4).

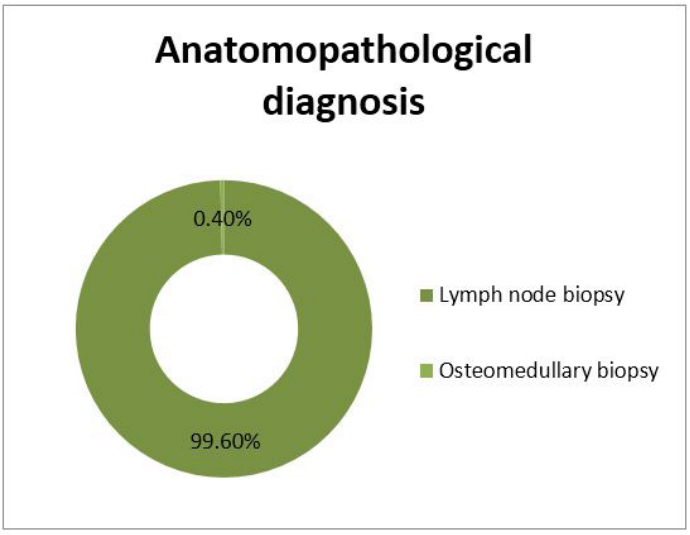

Figure 2: Types of biopsies.

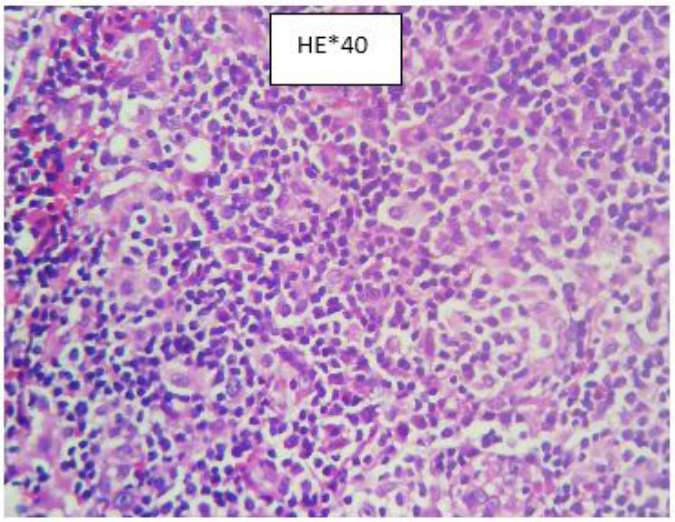

Figure 3: Reed Sternberg cells on a granulomatous stroma.

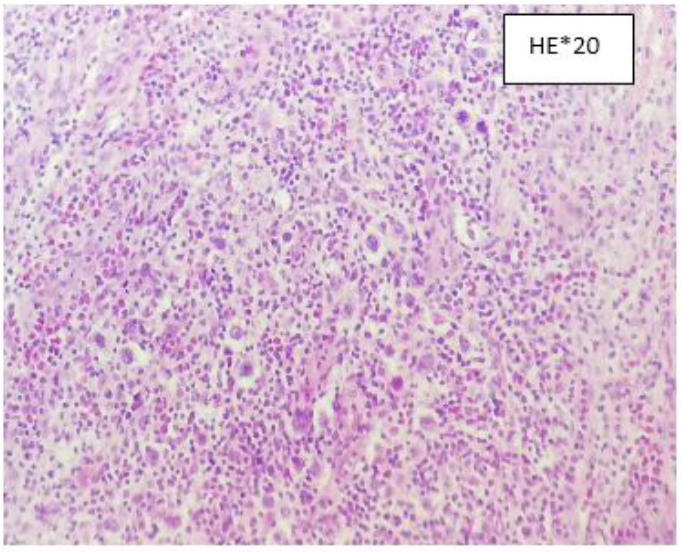

Figure 4: Sternberg cells and Reed Sternberg cells-like on a granulomatous stroma.

The immunohistochemical study was performed in 55.5% of cases (Table I) (Figures 5,6).

immunohistochemical markers	Percentage
CD30	97%
CD15	95%
CD20	34%
CD3	30%

Table 1: Immunohistochemical results.

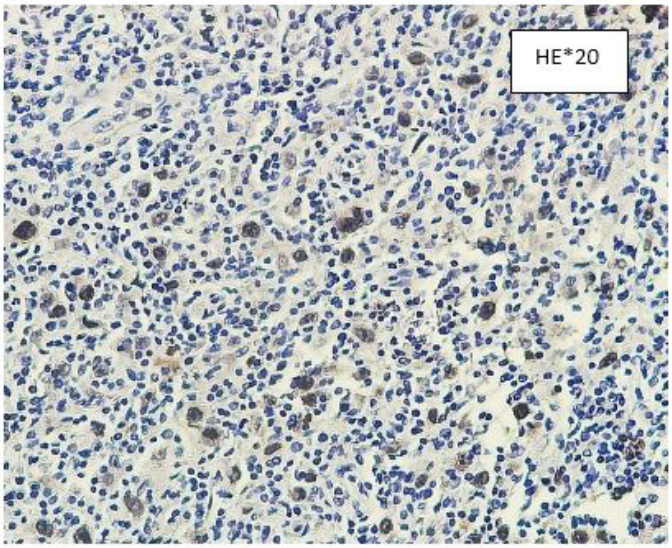

Figure 5: Nuclear labeling of tumor cells by PAX5.

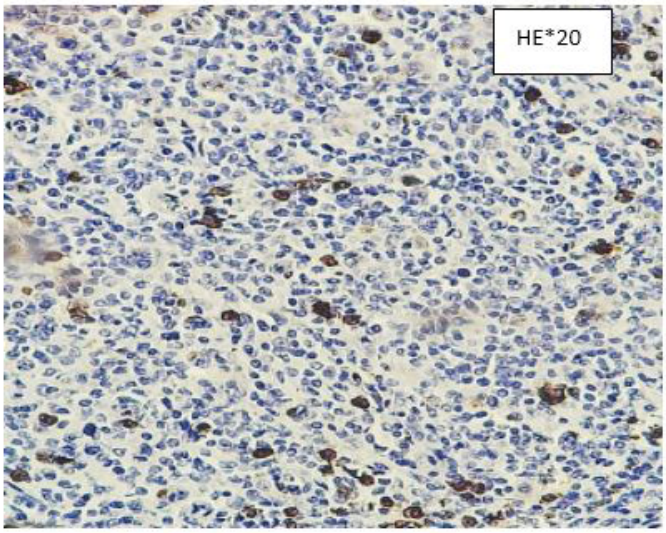

Figure 6: Cytoplasmic staining of tumor cells by CD15.

The extension assessment revealed: mediastinal involvement in 71.1% of cases, deep lymphadenopathy in 47% (Figure 7).

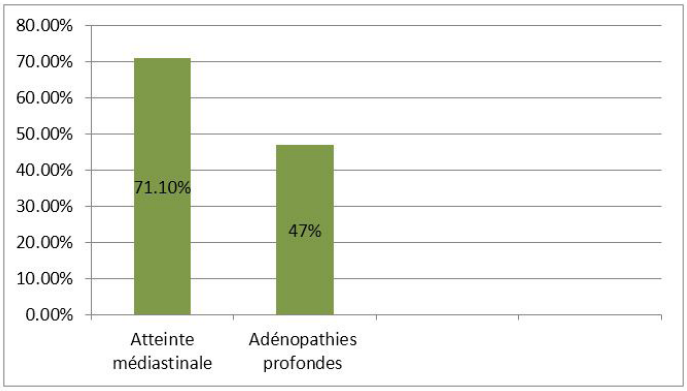

Figure 7: Assessment of extension.

Discussion

Hodgkin lymphoma is a tumor proliferation of lymphoid cells in one or more lymphoid organs, sometimes with extension in extra-ganglion sites. It is differentiated from Non-Hodgkin's Lymphoma (NHL) by the presence of morphologically and immunologically characteristic large tumor cells: Reed-Sternberg cells, a more frequently localized clinical presentation and a generally better prognosis [3,4]. According to the Lukes-Rye classification, four histological subtypes are individualized:

Type 1: predominantly lymphocyte

Type 2: sclerotinous

Type 3: mixed cellularity

Type 4: with lymphoid depletion

Recently, this classification has been superseded by the new World Health Organization classification which recognizes Hodgkin's disease as lymphoma and separates predominantly lymphocyte-dominant Hodgkin's disease from other subtypes that are the classic forms of disease [5-9].

In epidemiological terms, approximately 1,840 new cases of Hodgkin's lymphoma were diagnosed in France in 2011, representing 0.5% of all cancers. In Morocco: the cancer registry in the greater Casablanca region Incidence rate: 1.7 per 100,000 inhabitants / year Its incidence remains stable overall. There are two peaks of incidence: a first in the young adult (20-30 years) and a second in the subject aged over 60 years (the high authority HAS health). This is consistent with our results.

Male predominance has been reported by the majority of studies. The sex ratio is usually around three [10]. Our results are consistent with those of the literature, with a sex ratio (M / F) of 1.2 for any age. This predominance is much more pronounced in developing countries with a sex ratio ranging from 2.5 to 5.5 [11-13], whereas in Western countries the sex ratio is 1.3 children under 15 years [13]. Clinically cervical lymph node involvement is the most common (75%) followed by deep mediastinal localizations consistent with our findings. Medullary involvement is rare (5%) [3,6]. The positive diagnosis of Hodgkin 's disease is based on lymph node excision, which is the most frequent biopsy in our study (99.6%). In the case of an exclusive mediastinal localization the diagnosis can be obtained on tissue fragments taken under mediastoscopy. In this case the diagnosis can be hindered by important crushing artifacts, or even completely impossible in cases where the material removed is entirely fibrous, not containing tumor cells. This eventuality is unfortunately not rare, the mediastinal LH being almost exclusively of the histological scléronodulaire subtype. In such cases new samples are needed. Rarely the diagnosis is carried on osteomedullary biopsy (0.4% in our study). In all cases, the diagnosis is based on the detection of the tumor cells of the disease: Reed Sternberg's cell or its mononuclear variant, the Hodgkin cell [14,15].

The Reed Sternberg cell (CRS), or "diagnostic" cell (a name which is due to its morphological aspect, which is particularly suggestive of diagnosis), is a large lymphoid cell with abundant amphophilic cytoplasm, comprising at least two strongly nucleated nuclei (cell mirrored) surrounded by perinuclear clarification. Prominent nucleoli are eosinophilic with a "bird's eye" appearance. Binucleation is in fact most often artefactual, accounting for lobulation of the nucleus. Hodgkin's cell is the mononuclear variant of CRS. Lacunary cells are CRS. Their cytoplasmic retraction gives them a "spider-like" appearance. It is a reproducible artifact related to formalin binding. To these original morphological features is associated a not less unusual tumor environment including, in a variable manner according to the histological subtypes, B and T lymphocytes, polynuclear, including eosinophilic polynuclear macrophages, realizing the "granuloma" Hodgkin very feature. Despite the term "diagnostic cell", cellular elements of morphology very close to that of CRS can be found in other pathological situations, neoplastic or not: viral infections such as infectious mononucleosis or infection with Cytomegalovirus (CMV), or other tumors such as T-cell lymphoma, including anaplastic lymphoma, or even carcinoma and melanoma. In addition to its very particular morphology, CRS has a unique antigenic expression profile, which is found in current practice in immunohistochemistry. It is an "incomplete" or "altered" B lymphocyte phenotype associated with the aberrant expression of markers of other lineages. These cells express activating markers: CD30 +, CD15 +, CD71 +, and proliferation Ig Ki67. They are usually CD45 - (common leukocyte Ag) and EMA -. These cells may have markers B, CD79a in 20% of cases and more rarely CD20 +.

The extension of Hodgkin lymphoma can be lymphatic which explains the mediastinal lymphadenopathies, or hematogenous: at the origin of the splenic attack (found in 15 to 30% of cases). The radiological extension assessment makes it possible to define the different sites affected, to look for an extra-ganglionic lesion and thus to determine a staging as shown in (Table 2) of the disease in order to decide on the appropriate therapeutic strategy [4-6,8,13-15].

Designations applicable to any stage	
A	No symptoms.
B	Fever (temperature >38°C), drenching night sweats, unexplained loss of >10% of body weight within the preceding 6 months.
E	Involvement of a single extranodal site that is contiguous or proximal to the known nodal site.
S	Splenic involvement.
Stage	Description
I	Involvement of a single lymphatic site (i.e., nodal region, Waldeyer's ring, thymus, or spleen) (I); or localized involvement of a single extralymphatic organ or site in the absence of any lymph node involvement (IE).
II	Involvement of two or more lymph node regions on the same side of the diaphragm (II); or localized involvement of a single extralymphatic organ or site in association with regional lymph node involvement with or without involvement of other lymph node regions on the same side of the diaphragm (IIE).
III	Involvement of lymph node regions on both sides of the diaphragm (III), which also may be accompanied by extralymphatic extension in association with adjacent lymph node involvement (IIIE) or by involvement of the spleen (IIIS) or both (IIIE,S).
IV	Diffuse or disseminated involvement of one or more extralymphatic organs, with or without associated lymph node involvement; or isolated extralymphatic organ involvement in the absence of adjacent regional lymph node involvement, but in conjunction with disease in distant site(s). Stage IV includes any involvement of the liver or bone marrow, lungs (other than by direct extension from another site), or cerebrospinal fluid.

Table 2: ANN Arbor Classification [16].

Conclusion

Hodgkin's disease is a malignant hemopathy characterized by the presence of Reed Sternberg cells, whose lymphoid origin is demonstrated, but whose cause remains unknown. The profile of the patients of our series, approaches the epidemiological and clinical profile of the patients studied in the literature. The management implies multidisciplinarity, but the general practitioner is particularly involved in the diagnosis and participates in the surveillance. The establishment of a cancer registry in our region is recommended as the first step in the fight against cancer.

References

1. Fermé C, Reman O (2004) Lymphome de Hodgkin de l'adulte, Encyclopédie médico-chirurgicale 2004.
2. Allavena C (1988) Les séquelles des traitements de la maladie de Hodgkin chez l'adulte. Thèse Docteur en Médecine, Interne des Hôpitaux de Nancy 104.
3. Eghbali H, Soubeyran P, Soubeyran I, Monnerau A, Cazorla S (2002) Update on lymphomas. Bull Cancer 89: 89-99.
4. Delsol G (1998) Histopathological diagnosis of Hodgkin's disease. Rev Prat 4810: 1060-1064.
5. Rosai J (1996) Ackerman's surgical pathology. Mosby 1996: 616-666.
6. Stein H, Delsol G, Pileri S, Said J, Mann R, Poppema S, et al. (2001) Classical Hodgkin lymphoma. IARC Press 2001: 244-253.
7. Lippincott Raven (1998) Society for hematopathology program. Am J Surg Pathol 22: 125-133.
8. Kadin ME, Glatstein E, Dorfman RF (1971) Clinicopathologic studies of 117 untreated patients subjected to laparotomy for the staging of Hodgkin's disease. Cancer 27: 1277-1294.
9. Lukes RJ (1971) Criteria for involvement of lymph node, bone marrow, spleen, and liver in Hodgkin's disease. Cancer Res 31: 1755-1767.
10. Khanfir A, Toumi N, Masmoudi A, Hdiji S, Elloumi M, et al. (2007) Maladie de Hodgkin de l'enfant dans le sud tunisien: étude de 23 cas. Cancer/Radiothérapie 11: 241-246.
11. Alebouyeh M, Vossough P (1993) Hodgkin disease in Iranian children. Eur J Pediatr 152: 21-23.
12. Dinshaw A, Panda S, Link MP (1987) Paediatric Hodgkin's disease in India. J Clin Oncol 5: 742-749.
13. Oguz A, Karadeniz C, Okur FV, Citak EC, Pinarli FG, et al. (2005) Prognostic factors and treatment outcome in childhood Hodgkin disease. Pediatr Blood Cancer 45: 670-675.
14. Glaser SL, Dorfman RF, Clarke CA (2001) Expert review of the diagnosis and histologic classification of Hodgkin disease in a population-based cancer registry: interobserver reliability and impact on incidence and survival rates. Cancer 92: 218-224.
15. Stein H, Marafioti T, Foss HD, Laumen H, Hummel M, et al. (2001) Down-regulation of BOB.1/OBF.1 and Oct2 in classical Hodgkin disease but not in lymphocyte predominant Hodgkin disease correlates with immunoglobulin transcription. Blood 97: 496-501.
16. Edge SB, Byrd DR, Compton CC, Fritz AG, Greene F, et al. (2010) AJCC Cancer Staging Manual. Springer 2010.