JMBR: A Peer-review Journal of Biomedical Sciences
June 2017, Vol. 16 No. 1 pp 68-73

AN AUDIT OF HISTOPATHOLOGICAL REPORTS OF CHRONIC GASTRITIS IN A NIGERIAN TERTIARY HOSPITAL USING THE UPDATED SYDNEY SYSTEM

Obaseki D.E., Obahiagbon I.

ABSTRACT
Objective: To audit the degree of completeness of histopathological reports of chronic gastritis for prognostic information in a tertiary care hospital in the light of the updated Sydney system.
Material and Methods: One hundred and eighteen (118) reports of chronic gastritis from January to December 2014 were reviewed against the requirements of the updated Sydney system for the histological reporting of chronic gastritis from endoscopic gastric biopsy specimens.
Results: Majority of our reports still do not comply with the requirements of the updated Sydney system for the reporting of chronic gastritis from endoscopic gastric biopsies, for instance, only 26.3% contained information on the topography of gastritis, while 32.2% made any comments concerning aetiology. The percentages are much lower as for the reporting of graded variables.
Conclusion: The quality of histopathological reports of chronic gastritis is unsatisfactory overall, as far as the Sydney system is concerned. Many of our reports do not contain most of its important elements or completely ignore its use. We strongly recommend that our pathologists should fully embrace this system of reportage for chronic gastritis in line with international best practice.

INTRODUCTION

Gastritis is inflammation of the gastric mucosa and is representative of the response of the stomach to injurious agents, which may be infectious, chemical, radioactive or autoimmune.[1] It has a broad histopathological and topographical spectrum leading to patterns of disease that have become well recognised and characterized.[2] A sizeable number of the human population is plagued with one form of gastritis or another, owing to various aetiological factors, but the discovery of Helicobacter pylori as the most important cause of nonautoimmune chronic gastritis was an important milestone in our understanding of the pathology of chronic gastritis and its possible sequelae.[1] The discovery of other forms of chronic gastritis such as lymphocytic and reflux gastritis was prompted following the discovery of H. pylori. Accurate and uniform reporting of chronic gastritis from endoscopic gastric biopsies is vital to our study of the natural history of chronic gastritis, peptic ulcer disease and gastric carcinoma. Consequently, to take into account the rapid expansion of interest and

KEYWORDS:

Obaseki D.E., Obahiagbon I.
Dept. of Pathology, University of Benin Teaching Hospital, Benin City, Nigeria.

** Correspondence*
OBASEKI D. E.
Dept. of Pathology, University of Benin Teaching Hospital, Benin City,Nigeria.
Email.- darlobaseki@yahoo.co.uk

knowledge concerning chronic gastritis, and to remove diagnostic confusion, a working party of gastroenterologists and gastrointestinal pathologists met in Sydney, Australia, in 1990 to establish guidelines for the classification and grading of gastritis.[2]

The Sydney system for the classification of gastritis (updated in 1994 in Houston, Texas, United States of America[2]) emphasized that the reporting of chronic gastritis should include a combination of topographical, morphological and aetiological information. This is necessary to generate histopathological reports that will be more useful to the clinician with regards to prognosis and profiling.[1,3] It has both endoscopic and histological arms, but only the latter is considered in this article. This system has since received huge global acceptance, being widely adopted by gastroenterologists and gastrointestinal pathologists worldwide, including Nigeria, by the Society for Gastroenterology and Hepatology in Nigeria (SOGHIN). This is thought to have however not automatically translated into widespread and routine use among Nigerian pathologists, hence the need for audit. The Sydney classification incorporates aetiology, topography and the morphological features to be documented when reporting endoscopic gastric biopsies. Below are the highlights of the system:

- Topography is the core of the classification
- Aetiological hints are used as prefixes
- Any of the graded variables[1,3-6](chronic inflammation, activity, intestinal metaplasia, atrophy and the presence of H. pylori organisms) are used as suffixes

  Examples:

  -"H. pylori pangastritis, severely active with mild panatrophy"
  -"Autoimmune corpus gastritis with severe atrophy and intestinal metaplasia"
  -"Reactive mild antral gastritis; inactive; no H. pylori", and so on.

Furthermore, these parameters are semi-quantitatively graded as absent, mild, moderate or severe, with each successive grade representing an increase in severity of approximately one-third.[7]
The updated Sydney system has been in use now for over two decades, and both gastrointestinal pathologists and generalists in Nigerian tertiary care centres ought not to be strangers to it. The objective of this study is to audit the degree of completeness of histopathological reports of chronic gastritis for prognostic information in a tertiary care hospital in the light of the updated Sydney system.

MATERIALS AND METHOD

This is a retrospective evaluation of histopathology reports of 118 endoscopic gastric biopsy specimens received in the Department of Pathology at the University of Benin Teaching Hospital, Benin City, Edo state, Nigeria from January to December 2014.

Histopathology reports were assessed and checked for completeness of data items in comparison with the updated Sydney system for the reporting of chronic gastritis from endoscopic gastric biopsy specimens. Data items such as information on aetiology of chronic gastritis, topography and the key morphological graded variables (chronic inflammation, activity, intestinal metaplasia, atrophy and the presence of H. pylori organisms) were assessed. Only the information contents of reports were audited and not the diagnostic precision. Gastrectomy specimens and endoscopic biopsy cases with frank gastric carcinoma were excluded from the study.

RESULTS

Aetiology and Topography

Information on aetiology of chronic gastritis was provided in 32.2% of the reports. The rest of the reports were silent on the aetiology of chronic gastritis. As for the topography, which is the core of the Sydney system of reporting, 26.3% of reports specified that the gastritis was either corporal, antral or pangastritis. In 27.1% of the reports audited, all the information present was simply 'chronic gastritis' and nothing more. The clinicians had however stated in each case the locations from which biopsy specimens were obtained.

Graded Variables

The presence of chronic inflammation was mentioned in 100% of the reports but the severity of the chronic inflammation as mild, moderate or severe was only done in 23.7% of cases.

Comments as to the activity of chronic gastritis were found in 13.6% of the reports, but grading into mild, moderate or severe was done in none of these reports. Atrophy was mentioned in 7.6% of the reports, and intestinal metaplasia in 4.2%. These were however not graded as mild, moderate or severe. The presence of Helicobacter pylori organisms as a graded variable was not mentioned in any of the reports. These results are as displayed in table 1 below:

Table 1: Items of the updated Sydney system and percentage compliance in audited reports.

DATA ITEM IN THE UPDATED SYDNEY SYSTEM	NUMBER OF REPORTS IN WHICH MENTIONED (OUT OF 118 REPORTS)	PERCENTAGE (%)
AETIOLOGY	38	32.2
TOPOGRAPHY	31	26.3
CHRONIC INFLAMMATION	118	100.0
Grading	28	23.7
ACTIVITY	16	13.6
ATROPHY	9	7.6
INTESTINAL METAPLASIA	5	4.2
PRESENCE OF *H. PYLORI* ORGANISMS	0	0.0
'CHRONIC GASTRITIS'-ONLY REPORTS	32	27.1

DISCUSSION

Auditing may be viewed as a systematic and independent exercise undertaken to determine whether quality activities and results are in keeping with planned arrangements and whether these are effectively implemented and suitable to achieve the quality objective.[8] Being an integral part of clinical governance, it has links to both risk management programme and evidence based practice. As a means or strategy for risk management histopathology departments ought to utilize audits to minimize or check the proliferation of incomplete, misleading or even incorrect reports.[9] This was an audit of the information content of our histopathology reports of endoscopic gastric biopsies for chronic gastritis, and this research excludes any investigation of the diagnostic precision, specimen handling and the samples of the specimens for microscopic examination.

The topography of the gastritis is the core of the Sydney system.[1,3,5,10] The finding of comments about the topography of gastritis in only 26.3% of the reports is unsatisfactory. Many endoscopic gastric biopsies were sent in without the endoscopist specifying from where the specimens were obtained any more than just labelling them 'gastric biopsy specimens'. But even then, the pathologist should be able to microscopically identify the site in question so as to be able to make comments regarding the topography of the gastritis. In some cases, the endoscopist specified 'corpus' and 'antrum', but the pathologists still reported as 'chronic gastritis' without reference to topography. Such reporting negates the internationally acceptable standards of reporting chronic gastritis and ignores the usefulness of the Sydney system.

Comments about probable aetiology were found in 32.2% of reports. It is accepted that the aetiology may not be obvious and the pathologist may not be able in some cases to say categorically what the exact aetiology is. But Helicobacter pylori is a very important aetiological factor for chronic gastritis in our environment. An earlier study from here in southern Nigeria reported a prevalence rate of 59%, even when only 14.5% of patients had biopsies from two sites (one from corpus and one from antrum).[11] If the Sydney system had been better embraced here, with routine use of urease testing and routine histochemical staining beyond haematoxylin and eosin for the purpose of demonstration of H. pylori organisms, then we would see more reports commenting on the aetiology.

The graded variables are also quite poorly represented in our reports. Although chronic inflammation appears in all the reports, it is graded in only 23.7% of our reports. Most reporters seemed content with merely identifying the presence of chronic inflammatory infiltrates, which is not in keeping with the concept of the updated Sydney system of reporting. In Ibadan, southern Nigeria, Oluwasola and Ogunbiyi,[12] using the Sydney system graded 85 biopsies with chronic gastritis and reported 16.9%, 37.3% and 45.8% as mild, moderate and severe chronic mucosal inflammation respectively, and according to Udoh and Obaseki in Benin,[11] majority of patients with Chronic Gastritis (91.5%) had moderate to severe chronic inflammation. The grading of the severity of chronic inflammation provides clinically useful information to the clinician.

Comments on activity were documented in only 13.6% of reports, to indicate that gastritis was active. No reports however graded the activity into mild, moderate or severe, and no reports at all documented specifically that activity was absent. This shows that grading this variable is a practice yet to be adopted here. The presence or absence of neutrophil infiltration (activity) is a reliable and sensitive indicator of the presence or absence of H. pylori organisms,[13,14] and should be routinely documented in histopathological reports. The density of intraepithelial neutrophils correlates well with the intensity of H. pylori infection and the extent of mucosal damage.[2,13] Activity disappears within days of successful antibiotic treatment and cure of the infection while features of chronic inflammation usually take a longer time to resolve.[13,14] Thus, information on activity, when unreported, diminishes the clinical utility of the histopathological report.

The presence or absence of glandular atrophy was only mentioned in 7.6% of reports. Of these, no report specified that gastritis was non-atrophic. Mention was made of intestinal metaplasia in 4.2% of reports. H. pylori gastritis is known to over time result in glandular atrophy and intestinal metaplasia in a proportion of patients, and an African study has shown that this could occur in a considerable proportion of colonised subjects,[15] which makes it imperative to provide information on these routinely in histopathological reporting of chronic gastritis.

Neither the absence of H. pylori organisms nor their presence as a graded variable was specifically mentioned in any report. In this centre, routine testing for urease and routine histochemical staining (e.g with Warthin Starry silver, Genta or Giemsa) for the demonstration of H. pylori organisms is not yet the practice. But the most important information for clinical management purposes is the presence or absence of H. pylori and its density.[13] Demonstration of the presence or absence of H. pylori organisms (and the density when present) will have to become the routine if pathologists here are to excel at providing clinically useful reports to their clients, the clinicians.

In conclusion, the quality and degree of completeness of histopathological reports of chronic gastritis from here is unsatisfactory overall, as far as the Sydney system is concerned. Many of our reports do not contain most of its important elements, or its use is usually ignored. We strongly recommend that our pathologists should fully embrace this system of reportage for chronic gastritis in line with international best practice. Although some may find the updated Sydney system a bit cumbersome for routine use, the obvious benefits of enhanced clinical utility and international uniformity and acceptability are well worth the effort. There is need to design a special reporting form for gastritis to include the negatives that are important in the report but not usually included. Subspecialisation and expertise in the area of gastrointestinal pathology is essential. Generalists can also take advantage of this well thought out and clinically useful system of reporting chronic gastritis from endoscopic gastric biopsies.

REFERENCES

1. Price AB. The Sydney system: histological division. J Gastroenterol Hepatol 1991; 6:209-222.

2. Dixon MF, Genta R M, Yardley J H and Correa P. Classification and grading of gastritis. The updated Sydney system. Am J Surg Pathol 1996; 20(10):1161-1181.

3. Misciewicz JJ. The Sydney system: a new classification of gastritis. Introduction. J Gastroenterol Hepatol 1991; 6:207-8.

4. Tytgat GNJ. The Sydney system: endoscopic division. Endoscopic appearances in gastritis/duodenitis. Gastroenterol Hepatol 1991; 6:223–34.

5. Goodwin CS. The Sydney system: microbial gastritis. Gastroenterol Hepatol 1991; 6:235–7.

6. Strickland RG. The Sydney system: auto-immune gastritis. Gastroenterol Hepatol 1991; 6:238–43.

7. Sipponem P, Price AB. The Sydney system for classification of gastritis 20 years ago. J Gastroenterol Hepatol 2011; 1:31–34.

8. Nambiar A, Vivek N, Bindu MR, Sudheer OV, Bai L. Completeness of low anterior resection pathology report: A hospital-based audit with recommendations on improving reporting. Indian Journal of Cancer 2010; 47 (2): 156-59.

9. Shahid J, Azhar M. Curriculum for specialist training in histopathological audit. Journal of Cancer 2010; 47 (2): 156-59.

10. Udoh MO, Ekanem VJ. Morphological appraisal of the Sydney system of classification of chronic gastritis: a review. Pioneer Medical Journal 2015; 8:1-14.

11. Udoh MO, Obaseki DE. The histomorphologic features of chronic gastritis in southern Nigeria. Histopathological evaluation of H. pylori associated gastric lesions in Benin City, Nigeria. East Afr Med J 2012; 89(12):408-413.

12. Oluwasola AO, Ogunbiyi JO. Chronic gastritis and Helicobacter pylori infection in University College Hospital Ibadan. Nigeria – A study of 85 fibre optic gastric biopsies. Nig J Med 2004; 13(4):372-8.

13. Zhang C, Yamada N, Wu YI, Wen M, Matsuhisa T, Matsukura N. Comparison of Helicobacter pylori infection and gastric mucosa histological features of gastric ulcer patients with chronic gastritis patients. World J Gastroenterol 2005; 11(7):976-981.

14. Genta RM, Lew GM, Graham DY. Changes in the gastric mucosa following eradication of H. pylori. Mod Pathol 1993; (6): 281-9.

15. Kuipers EJ, Meijer GA. Helicobacter pylori gastritis in Africa. Eur J Gastrenterol Hepatol 2000; 12(6):601-3.