



Short Communication

Revisiting old slides – How worthwhile is it?

Sarla Agarwal, Neelam Wadhwa *

Department of Pathology, University College of Medical Sciences, University of Delhi, Shahdra, Delhi 110095, India

ARTICLE INFO

Article history:

Received 5 November 2009

Received in revised form

21 January 2010

Accepted 26 January 2010

Keywords:

Diagnostic errors

Histopathology

Quality assurance

Retrospective review

Surgical pathology

ABSTRACT

Retrospective review of surgical pathology cases is a sensitive and effective method for identifying diagnostic discrepancies. As such studies from developing countries are limited, we undertook a retrospective review of 2408 surgical pathology cases (excluding skin, liver, and kidney biopsies) by two review pathologists to evaluate the quality of histopathology reporting, to identify the variations therein, and to classify them as major and minor according to the impact these would have on patient diagnosis, prognosis, or management. Diagnostic concordance was achieved in 93.1% of cases. The frequencies of overall and major differences in opinion were 6.9% and 3.4%, respectively. Major discrepancies were more common in non-neoplastic lesions than tumors. Endometrial pathologies were misdiagnosed maximally. The overall diagnostic agreement rate in the present study is in tune with those reported earlier although the frequency of major differences is higher. This is definitely a cause for concern and calls for remedial action.

© 2010 Elsevier GmbH. All rights reserved.

Introduction

The histopathology report is an important corner stone in patient diagnosis and often an invaluable guide to further treatment [4]. The quality of histopathology reporting in a routine hospital setting is influenced by various factors [8]. Retrospective review is a sensitive and effective method for identifying areas of disagreement and decreasing errors in surgical pathology material [4,8,12]. Ideally, there should be no discrepancy between the original and review diagnoses.

Guru Teg Bahadur Hospital is a tertiary care hospital attached to University College of Medical Sciences (a medical college) in Delhi. The annual turnover in the outpatient department is approximately 1.5 million patients. All surgical specimens generated in the hospital and blocks and slides of referred patients (>10,000 cases per annum) are reported in the Department of Pathology by different faculty members on a monthly basis. Informal intra-departmental consultation for difficult/atypical cases is a well-established activity. The reporting being rotational in nature, heterogeneity in reporting quality is unavoidable. Variations essentially reflecting academic points with no/little implication on patient outcome are acceptable. Discrepancies with a bearing on patient diagnosis, prognosis, or management are unacceptable, though inevitable.

Aims and objectives

This study was conducted to evaluate the quality of histopathology reporting, to identify the variations therein, to classify them according to their impact on patient diagnosis, prognosis, or management, and to provide information about the prevalent working practices.

Materials and methods

Three thousand surgical pathology cases were reviewed. Skin, liver, and kidney biopsies (533), non-representative specimens (17) or for which slides could not be traced (42) were excluded from the study. Thus 2408 cases formed the study material. All cases were evaluated by 2 review pathologists in context of the clinical history provided as in a routine reporting procedure. The diagnoses of the review pathologists and the primary pathologist were compared. In case of a difference, the case was re-evaluated. Cases with non-consensus diagnoses among review pathologists were also recorded. The changes in diagnosis with potential for significant change in patient diagnosis, prognosis, or management were classified as major diagnostic disagreements. Minor disagreements related to differences in interpretation with no/minimal bearing on patient care. These disagreements were reclassified as false positive (reporting a lesion when none was existent), false negative (missing a lesion in the initial report), type (difference in the nature of the report of the original and the review pathologists), or threshold (review pathologist agreed to the general nature of the lesion, but disagreed as to its degree)

* Corresponding author. Tel.: +91 11 9873647787; fax: +91 11 1122590495.

E-mail addresses: profsarla@gmail.com (S. Agarwal), drneelam428@yahoo.co.in, drneelamwadhwa@gmail.com (N. Wadhwa).

errors. Each peer review pathologist maintained a log sheet of the cases reviewed and the type(s) of error detected. The results were compiled on completion of the study.

Observations

Of the 2408 cases evaluated, there was a difference in opinion in 166 (6.9%) cases. These disagreements were classified as major and minor in 82 (3.4%) and 84 (3.5%) cases, respectively (Table 1). The maximum number of cases with major differences in opinion ($n=45$) was from female genital tract. In 23 cases of infertility, there was a difference in the phasing of endometrium, i.e., secretory versus non-secretory (typing discrepancy). Five cases of endometritis were missed. In 3 cases, an erroneous diagnosis of pregnancy was committed, while it was missed in 2 cases. In one case, a wrong diagnosis of endometrial carcinoma was made which on review was interpreted as complex hyperplasia without atypia. Two cases of uterine cervix initially diagnosed as squamous cell carcinoma were reported as inflammatory lesions on review. There was difference in typing and grading of malignant lesions in 2 and 1 cases, respectively. Of the 4 cases of ovarian pathology with major differences, 2 related to endometriosis. While in 1 case the diagnosis was missed, it was committed in the other, which on review was found to be a case of luteal cyst. There were 2 missed cases of oophritis. Of these, 1 had evidence of filariasis, while the other showed foreign body granulomas. One case of xantho-granulomatous inflammation of the fallopian tube was misdiagnosed as

tuberculosis. One case initially diagnosed as smooth muscle tumor of uncertain malignant potential (STUMP) of the uterus on review turned out to be a leiomyoma with degenerative atypia.

Of the 14 cases of aero-digestive and hepato-biliary system with significant differences in opinion, most (9) were related to inflammation of the gastro-intestinal tract. Of these, 4 were initially misdiagnosed as tuberculosis (false positive); 2 cases each of enteric perforation and active gastritis were missed, and one case of oral pemphigus vulgaris was misdiagnosed as lichen planus. False positive and false negative diagnoses of carcinoma of duodenum and stomach, respectively, were made in 1 case each; intestinal metaplasia was picked up on review in esophagus and stomach (1 case each). In a single case of gall bladder carcinoma, the diagnosis was missed at the time of initial reporting. Eleven cases of musculo-skeletal and soft tissue lesions had major diagnostic discrepancies. Two cases each of tuberculous osteomyelitis and chronic osteomyelitis were signed out as non-specific inflammatory lesion and normal tissue, respectively, while 2 cases of metabolic disease were missed in initial reporting. There were 2 false positive cases of malignancy, one false positive diagnosis of inflammation, and 1 each of incorrect typing and grading of tumors.

A higher tumor grade was wrongly assigned to 4 urothelial tumors. In a case of megaloblastic anemia with hypercellular bone marrow, a diagnosis of leukemic involvement was wrongly committed. One case of Non Hodgkin's lymphoma was misdiagnosed as Hodgkin's disease, and one case of angio-lymphoid hyperplasia was missed. One case of mucinous carcinoma of

Table 1

Distribution of cases with differences in opinion with reference to various organ systems and classification in major or minor category.

Organ system	Total no of cases, n (%)	Major difference, n (%)	Minor difference, n (%)
Female genital system	104 (62.7)	45 (54.9)	59 (70.2)
1. Endometrium	74	34	40
2. Cervix	13	05	08
3. Ovary	06	04	02
4. Fallopian tube	06	01	05
5. Uterus	04	01	03
6. Placenta	01	00	01
Aero-digestive and hepatobiliary tract	23 (13.9)	14 (17.1)	09 (10.7)
1. Stomach	06	04	02
2. Small intestine	07	04	03
3. Large intestine and appendix	03	01	02
4. Mouth and esophagus	02	02	00
5. Peritoneum	02	02	00
6. Gall bladder	02	01	01
7. Larynx	01	00	01
Musculo-skeletal system and soft tissue	20 (12.0)	11 (13.4)	09 (10.7)
1. Soft tissue	13	07	06
2. Bone	05	04	01
3. Synovium	02	00	02
Urinary system	06 (3.6)	04 (4.9)	02 (2.4)
1. Urinary bladder	05	04	01
2. Kidney	01	00	01
Hematopoietic and reticulo-endothelial system	05 (3.0)	03 (3.6)	02 (2.4)
1. Bone marrow	03	01	02
2. Lymph nodes	02	02	00
Male genital system	03 (1.8)	01 (1.2)	02 (2.4)
1. Prostate	02	01	01
2. Testis	01	00	01
Mammary gland	02 (1.2)	02 (2.4)	nil (0.0)
Nervous system, eye and ear	03 ^a (1.8)	02 (2.4)	01 (1.2)
Total no. of cases	166 (100.0)	82 (100.0)	84 (100.0)

^a 1 each.

Download English Version:

<https://daneshyari.com/en/article/2156283>

Download Persian Version:

<https://daneshyari.com/article/2156283>

[Daneshyari.com](https://daneshyari.com)