Journal Reviews

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Hello!

This is the first review I have put up. I have tried to make it as short as possible and readable, and have tried to avoid mistakes in content and transcription.

But still to err is but human..... I hope you can overlook it..... but please feel free to forward your opinion / criticism on the write up which follows

American Journal of Clinical Pathology

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This is one of my favorite journals as it encompasses articles related to all subspecialties of our chosen area of expertise Pathology.

So I decided to start the Journal club reviews with articles from this journal.

There were a couple of articles on Thyroid pathology and since we all get quite a few of those in our practice I am summarizing a couple of them.

1. In the editorial / original article section there is an article by Andrew A. Renshaw MD and Edwin W Gould MD from dept of Pathology, Baptist Hospital of Miami, Florida.

Title: Why there is the Tendency to overdiagnose the Follicular variant of Papillary Thyroid carcinoma.

In this article the authors have brought up the issue of overdiagnosis. It attributes private practitioners in pathology with a tendency to overdiagnose. This is exemplified by an anecdote told by *Juan Rosai*. He was asked by a private pathologist, to give consultation on an *atypical melanocytic lesion*. Dr Rosai after much deliberation labeled it as *Benign*. The friend thanked him for his opinion but opted to give the diagnosis of *Malignant Melanoma*. His rationale for this was:

> If the diagnosis is malignant melanoma and patient does not come back, everyone is happy that the pt. has been cured.
>
> If the diagnosis is given as benign lesion and the pt. comes back with recurrence the pathologist ends up making rounds of Court.

The authors say that defensive pathology has become ingrained in the psyche of most private pathologists. It used a lot in diagnosing the following lesion.

The lesion under discussion is the *Purely follicular variant of papillary thyroid carcinoma. (PTC)*. Lindsay first described this in 1960. And as we all know it must have characteristic nuclear features of a papillary carcinoma in addition to predominant follicular pattern to be so diagnosed.

Despite being recognized well as an entity, this variant is not well characterized.It is often well circumscribed and encapsulated.

The question raised is ..... What is the minimum histologic definition of follicular variant of PTC???

Do occasional grooved nuclei, or those with pale chromatin qualification enough to give the diagnosis. Should these be uniformly present or not? Are they the pseudo clear nuclei or true ground glass nuclei?

A couple of studies have been done which summarize that at least 25% of these patients had regional lymph node mets / distant mets. Thus these neoplasms though indolent in behavior can cause distant metastasis.

When faced with a solitary nodule the pathologists have to decide whether this follicular nodule is a neoplasm or a dominant nodule of goiter.

There has been a lowering of threshold of follicular variant of PTC as observed by the authors. The reasons given are.

Rare aggressive clinical behavior of the neoplasm

Lack of strict diagnostic criteria

Surgeons increased willingness to do sub total thyroidectomies

Use of radioactive iodine by endocrinologists after surgery for minimally invasive follicular variant of PTC

Majority cytologies with minimal findings are reported as atypical cannot rule out papillary carcinoma..... hence leading to surgery

The limitations of diagnostic criteria on cytology and histopathology lead to overdiagnosis along with the combination of aggressive surgeons/ endocrinologists.

So , the question arises as to what should be done?

The authors solutions (though they claim its not easy to come by solutions):

1) To conduct a study to review inter observer variability and reach some conclusion.

2) To convene a consensus conference to arrive at a reproducible minimal diagnostic criteria

3) OR ---- To use the terminology of *well differentiated tumour of uncertain malignant potential*, for tumours, which are encapsulated and show some nuclear features of a typical papillary carcinoma.

The authors conclude that no consensus criteria is available and only nuclear cytology is still used.

And they say As long as we are forced to practice in a legally exposed climate, we will continue to use a very low threshold for the diagnosis, since we would much rather cure some patients with benign disease than see patients with malignant disease in court .

2. In the same journal John K. C. Chan has an article titled Strict criteria should be applied in the diagnosis of encapsulated follicular variant of papillary thyroid carcinoma.

He states that

Follicular adenoma is a benign lesion

Encapsulated variant of PTC papillary or purely follicular variant have an excellent prognosis

Thus John KC Chan proposes it is justified to err on the benign side when there are uncertainties in the diagnosis.

He is not much bothered about legal hassles and does not advocate overdiagnosis.

According to his experience since no single morphologic feature is pathognomic of PTC a constellation of features has to be looked into.

He has formulated the following criteria for diagnosis of encapsulated follicular variant of PTC

1) Oval rather than round nuclei

2) Crowded nuclei, emphasizing loss of polarity

3) Clear nuclei or those with pale chromatin and not artifactually localized to centre of the nucleus.

4) Presence of Psammoma bodies.

If one of these four is missing the following subsidiary features have to be present for diagnosis.

i) Presence of abortive papillae

ii) Predominantly elongated or irregularly shaped follicles

iii) Dark staining colloid

iv) Presence of rare nuclear pseudoinclusions.

v) Multinucleated histiocytes in lumens of follicles

This author also agrees to the use of terminology like

Well differentiated thyroid tumour of uncertain malignant potential when capsular or vascular invasion is not present AND

Well differentiated thyroid carcinoma, not otherwise specified when there is definite capsular or vascular invasion (to distinguish between PTC and follicular carcinoma)

3. Well if you PIs are not yet bored of thyroid and thyroid and more thyroid.....there is some more of it.

TITLE: Follicular patterned lesion of the thyroid The bane of the pathologist

Zubair W. Baloch, Virginia A. Li Volsi

University of Pennsylvania Medical Centre, Philadelphia.

I am not going to write much about this article, as it is quite basic, highlighting cytologic and histologic criteria of follicular patterned lesions of thyroid.

Though I will mention a few interesting points mentioned by the authors which they follow in their practice.

Use of the term *minimally invasive follicular carcinoma* for tumours that show capsular invasion only

Use of *grossly encapsulated angioinvasive follicular carcinomas* for tumours with vascular invasion with or without capsular invasion

Most studies recommend 10 tissue blocks representing tumour capsule and thyroid parenchyma to rule out capsular invasion

Plus the authors also have referred to *Hybrid tumours* These show features of both follicular and papillary cancer. These lesions grow as solitary encapsulated tumours like follicular carcinoma and also show some nuclear features suggesting papillary carcinoma. Majority of such tumours exhibit vascular invasion. Further studies are required to classify them as an entity.

It will be good for the postgraduates to read this article, that is, if they are interested enough. I know at least I used to collect such articles and make an attempt to go through them.

Finally we leave thyroid aside and move to other topics.

For our journal reviews as a postgraduate student I used to try and review something from journals other than pathology. So I will try and get something interesting from other avenues of science and medicine.

The following information was mentioned to me by my professor Dr. Karuna Rameshkumar - an excellent teacher a wonderful human being with a very loving and compassionate heart.

We all are aware of the Nobel Prize some may secretly wish to achieve it one day, and maybe rightly so.

Few of us know about the Ig Nobel Prize or the IGNOBEl Prize????

It was first presented by the Journal of Irreproducible Results in 1968

The Ignobel Laureates are honoured for their irreproducible achievements in science and other areas of human endeavor. The winners have been consigned to the realms of obscurity.

More about this can be seen on .... http://www.improb.com/ig/ig-pastwinners.html.

- In 2001 IgNobel prize in medicine was awarded toPeter Barss of Mc. Gill Univ. for his study on "Injuries Due to Falling Coconuts" [Published in: The Journal of Trauma vol. 21, no. 11, 1984, pp. 990-1.]

- Chittaranjan Andrade, MD & B. S. Hari, MBBS from NIMHANS, Bangalore got the prize in Public Health

This was awarded for their unique work on the nose picking behaviour in adolescents.It has been published in "A Preliminary Survey of Rhinotillexomania in an Adolescent Sample" Journal of Clinical Psychiatry, vol. 62, no. 6, June 2001, pp. 426-31.

Rhinotillexomania is a recently coined term for compulsive nose picking.