

## Fine Needle Aspiration Cytology in Hilla

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### Abstract

The first clinical study in Babylon Governet-Hilla done for 164 cases in which FNAC was done for them for its accuracy.

The results were judged by the same pathologist which found in positive accuracy result of 93.9% .

It is first clinical study about this subject done in Hilla and this method is faster , easy to do and less expensive and now it is commonly used in IRAQ and abroad.

Fine Needle Aspiration Cytology in Hilla .

### Aim of the study

To evaluate FNAC experience in Hilla, its false negative and positive results:

### Material and Method

Study of 164 cases of breast mass, FNAC was done for them and the study compared with wax block biopsy results by the pathologist.

This study of 164 cases was done in Hilla (in the Hilla republic hospital and in the private clinic and hospital), from different occupations and the age group of the patients varied from 20 to 55 years.

The method of aspiration is done by using disposable syring with needle size 21-22G, the aspiration is done by the surgeon or by the pathologist or the surgeon mark the mass to be aspirated the pathologist.

The aspiration is done in different directions with negative pressure, the pressure is released while the needle in inside the mass then take off the needle, pull the piston then put on the needle and push the piston to evacuate the content of the needle on the slide, then prepare the slides by sandwich method

-The first slide is fixed by absolute ethanol and stained by Haematoxyline-Eosin.

- The second slide is fixed by drying and stained by Leishman stain.

## Fine Needle Aspiration Cytology (FNAC).

The time, cost, and difficulty involved in performing open breast biopsies in the hospital can be greatly reduced by performing fine needle aspiration cytology<sup>(1)</sup>.

Fine needle aspiration of breast masses is safe and reliable diagnostic technique that can be performed in the clinic with or without using local anaesthesia.

Although relatively easy to perform it is essential that the proper equipments are available, adequate samples are obtained, and smears are prepared in a manner suitable for an experienced pathologist to interpret<sup>(2)</sup>.

When a palpable breast mass is suspected of being cancerous, the diagnosis can be obtained with reasonable confidence by fine needle aspiration cytology. The procedure is not recommended to diagnose non proliferative benign disease because such tissue is characteristically acellular<sup>(3)</sup>.

The situation with fine needle aspiration is quite different. There is no longer any question that in experienced hands the technique is highly reliable.

FNAC can, cytologically, specifically diagnose 90% of all palpable breast neoplasms, and if an experienced cytopathologist is on sit,

the patient can receive her initial diagnosis rapidly<sup>(1)</sup>.

Of approximately 1 million breast biopsies performed annually in the US, nearly 800,000 prove benign, of this total, 720,000 could potentially have been diagnosed with FNAC in the office.

The most significant variables in the accuracy of the procedure are the size of the lesion and proficiency of the individual performing the aspiration.

Fine needle aspiration is less than ideal for some types of breast carcinoma, those associated with very extensive fibrosis, intraductal carcinoma tubular and cribriform carcinoma, and in general, the very small tumors, as Kline *et al* 181 wisely indicated, this technique should be used to supplement, and not to compete with, histologic examination.

Most important, it should always be remembered that negative or inconclusive cytologic findings are not to be regarded as a definitive diagnosis if there is clinical suspicion of a malignant neoplasm<sup>(6)</sup>.

## Complication

Although there are few complications which have been reported in the literature as (Pneumothorax, Haematoma formation, Acute mastitis, and rarely tumour growth within the needle track)<sup>(2)</sup>, while in our study, only 2 cases of simple minor

localised haematoma and subcutaneous pruritis in the skin has been noticed for whom no treatment needed more than reassurance.

With that the psychological state of the patient determine the step of FNAC as few patients refuse to do

this procedure frighting from the result.

## Results

In our study of 164 cases with breast mass in which FNAC was done for them, the results are —>

FNAC	number	%
- TOTAL NUMBER = 164		
- Identical result (result of FNAC is similar to the result of biopsy), and this include —>	145	93.9%
- Positive result for carcinoma	46	28%
- Negative result for carcinoma	108	65.8%
- Not identical result (result of FNAC is not similar to the result of biopsy), and this include —>	10	6%
-* False positive result	3	1.8%
-** False negative result	7	4.2%

\* False positive result means that FANC is (+ve) for malignant cells, while the biopsy is (-ve) for malignant cells.

\*\* False negative result means that FNAC is "(-ve) for malignant cells, while the biopsy is (+ve) for malignant cells.

Of this total (164), about (154) of cases the result of FNAC is identical to that of biopsy. This mean that the accuracy rate of FNAC in our study is about 93.9% which included both positive and negative results.

With sensitivity value of 86.79% and specificity of 97.2%.

The results of our study is compared with the results of other studies in world as shown in this table:

FNAC	Our Study	Other Studies (klrby)(2)
Accuracy rate	93.9%	84%-99.5%
* False negative	4.2%	0.7%-22%
- False positive	1.8%	rate

\* The principale cause of false negative results being sampling and slide preparation error.

## Conclusion

The first step in the management of a palpable breast mass is FNAC, in which it carry a high accuracy rate and also it is faster, easier to do and less expensive.

So I do recommend doing FNAC for any mass or painful lumpy breast prior the exploration,

and to avoid the false negative results by —>

- 1- Increasing number of aspirate.
- 2- Paying proper attention to technical preparation of the produced tissues.
- 3- Using an experienced clinician to perform the aspiration.

## References

- 1- Clinical Proceedings (A publication of the association of reproductive health professionals) July 1993.
- 2- Atlas Of General Surgery 1996 third edition. Kirby I. Bland page 82.
- 3- Fundamentals Of Surgery Richard D. Liechty Robert T. Soper sixth edition 1989.
- 4- Diseases Of The Breast test and syllabus Elias G. Theros. M. D. 1988.
- 5- Bailey and love's Short Practies Of Surgery twenty-first edition 1991.
- 6- Ackerman's Surgical Pathology Juan Rosai volume two seventh edition 1989.

## فحص الرشف الخلوي بأستعمال الوخز بالابرة في اورام الثدي في بابل

عبد الغني الدباغ  
كلية الطب / جامعة بابل

الخلاصة  
تمت في محافظة بابل - مدينة  
الحلة- دراسة سريرية لـ (١٦٤) سيدة  
مصابة بورم وأمراض الثدي بواسطة  
فحص الرشف الخلوي بأستعمال الوخز  
بالابرة .  
وقد ثبت وجود التطابق والدقة في  
التشخيص ما بين الرشف الخلوي  
بأستعمال الوخز بالابرة وبين اخذ عينة من  
الثدي بأجراء العملية بنسبة ٩٣,٩٪ من  
الحالات وتعتبر هذه النسبة مقاربة الى  
بقية النسب في دراسات مختلفة في أماكن  
أخرى داخل وخارج القطر .  
علماً ان هذه الدراسة هي الاولى من  
نوعها في محافظة بابل - مدينة الحلة ،  
وهذه الطريقة سريعة ، سهلة العمل وقليلة  
التكلفة وهي مشاعة الاستعمال في العراق  
وفي العالم .