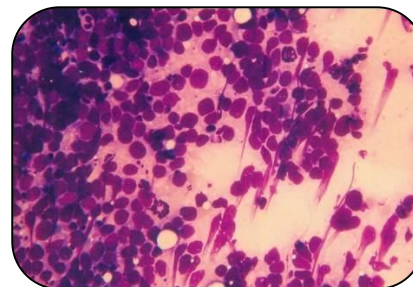




STUDIES ON NEEDLE ASPIRATION CYTOLOGY FOR SUPERFICIAL GENTLE TISSUE

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SUMMARY

Diseases of the skin and superficial subcutaneous smooth tissues gift with a wide array of lesions starting from nonspecific dermatoses and inflammatory lesions to frank neoplasms. Even though cytopathology is an exquisite diagnostic device in habitual dermatologic exercise, studies regarding histopathological and cytological correlation are sparse. The intention of this study turned into to investigate the concordance price between cytological and histopathological diagnosis of skin and superficial smooth tissue lesions.

CREATION

Various styles of diseases are encountered inside the pores and skin and superficial gentle tissues of the subcutis, ranging from nonspecific dermatoses and inflammatory strategies to neoplastic conditions. Even though cytopathology is an remarkable diagnostic tool in habitual dermatologic practice (1), research relating to histopathological and cytological correlation are sparse.

The common difficulties encountered in cytological analysis of number one tender tissue neoplasms are their overlapping cytomorphological capabilities, heterogeneity in a number of the mass lesions and the accelerated reputation of borderline (intermediate) lesions (2).

SUBSTANCES AND TECHNIQUES

510 patients have been selected, which was underwent high-quality needle aspiration (FNA) for check-up of diverse skin and superficial gentle tissue lesions all through the term from july 2018 to February 2020 were included within the observe. An in depth records of the patients became taken and physical examination findings were recorded.

Fna was done for analysis in all cases. Pores and skin scraping changed into done for superficial ulcers and ulcerated tumors. Tissue biopsy samples were received for 147 patients (28.20%). Excisional, incisional and punch biopsies were completed for histopathological exam in 78.23%, 7.48% and 14.29% of the patients, respectively. Under aseptic precautions, exceptional needle aspirations have been completed the use of a 21 gauge needle by palpation through pathologists. For most of the cases a unmarried skip properly sufficed. For larger lesions, 2 or 3 separate passes had been made. Cytological smears had been stained with hematoxylin-eosin (h&e) and leishman-giemsa for all instances. Ziehl-neelsen (zn) staining turned into performed for 13 cases. Histologic sections were automatically stained with the h&e stain. Concordance fees among cytological and histopathological prognosis have been analyzed. The examine was accredited via the institutional ethics committee.

CONSEQUENCES

Out of the 510 sufferers studied, 263 patients (51.56%) had been male and 247 (48.44%) were female. The youngest patient changed into 2 years vintage, the oldest being sixty eight years (desk i). There had been 253 non neoplastic lesions and 257 neoplastic. Most people of the neoplastic lesions had been benign (189 instances (73.54%)) and simplest sixty eight (26.46%) instances have been malignant.

Epidermal inclusion cyst (eic) become the most often encountered non neoplastic lesion (a hundred thirty five instances fifty three.35%). Other not unusual lesions had been acute suppurative lesions (65 instances 25.69%), ganglion (21 cases eight.92%) and granulomatous lesions (28 cases eleven.06%). Three instances of calcinosis cutis and a single case of tender tissue filariasis have been stated (determine 1). Out of the 13 instances mentioned as granulomatous lesion, 10 confirmed acid speedy bacilli in zn smears.

A few of the benign neoplasms, lipoma became the foremost lesion (76.70%). Different commonplace lesions had been benign spindle mobile neoplasms (14.28%) and vascular lesions (3.17%). We found a few cases of neurofibroma, schwannoma and benign fibrous histiocytoma that in which cytologically identified as benign spindle mobile lesion. We got here across three instances of benign adnexal lesion among which one changed into diagnosed as pilomatrixoma (parent 2). The opposite two could not be particularly typed but each have been histologically identified as pilomatrixoma. An erroneous analysis of eic became given in 2 instances however later they had been histologically showed to be pilomatrixoma (desk ii).

There had been 68 malignant tumors with an age variety of two-sixty five years. Many of the malignant tumors, squamous cellular carcinoma changed into the most not unusual (69.Eleven%) accompanied by using malignant spindle cellular lesion (eleven.76%) (table iii).

The youngest of our cases became a 2-yr-antique boy who provided with a swelling in the left higher eyelid and was identified as embryonal rhabdomyosarcoma (figure

Table i : distribution of sufferers by age and sex

Sex	No. of cases	0-20	21-40	41-60	>60
Male	263	43	89	96	35
Female	247	47	82	88	30
Total	510	90	171	184	65

Desk ii: distribution of benign neoplasms

Type	No. of cases	%
Lipoma	145	76.71%
Benign spindle cell neoplasms	27	14.28%
Vascular lesions	6	3.17%
Benign adnexal lesions	3	1.58%
Nodular fasciitis	5	2.64%
Chondroid syringoma	3	1.58%

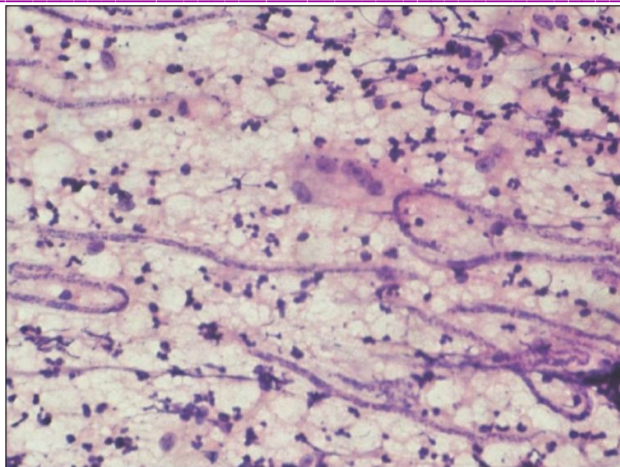
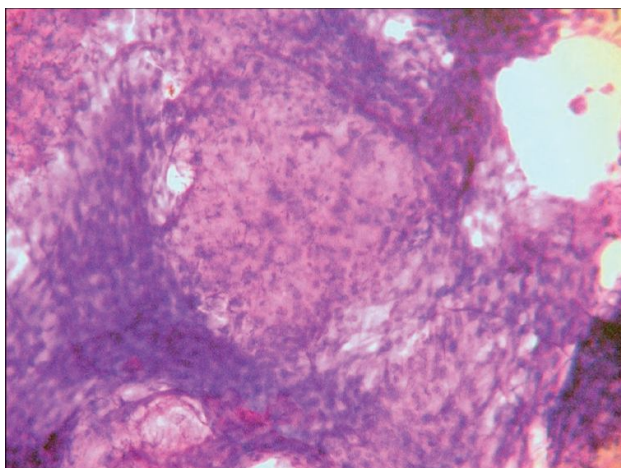


Figure 1: smear displaying person filarial worms and a giant cell on a background of combined inflammatory reaction (leishman-giemsa; x40).



Parent 2: smear from pilomatrixoma displaying clusters of basaloid cells and scattered squamous cells on a heritage of calcification and amorphous cloth (leishman-giemsa; x40).

3a,b). Out of the eight cases pronounced as malignant spindle mobile lesions, 3 were provisionally identified as mpnst out of which 2 have been showed histopathologically and the alternative changed into eventually recognized as monophasic synovial sarcoma (determine 4a,b). Many of the other five instances, three were sooner or later recognized as fibrosarcoma and 2 as angiosarcoma. Precise typing ought to consequently be achieved in just 25% of the instances for these form of lesions.

One uncommon case of extraskeletal plasmacytoma became reported, growing in the scalp of a 6-yr-old boy and is a completely uncommon website online for this neoplasm (figure five). The smears from the 4 cases of malignant melanoma that offered as pigmented cutaneous nodular lesions verified pleomorphic melanocytes having bizarre hyperchromatic nuclei and intracytoplasmic melanin pigment (figure 6a,b).

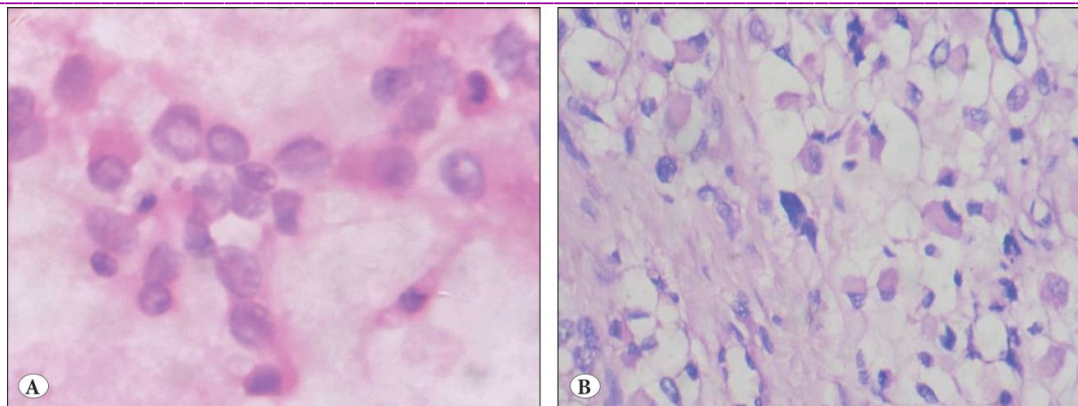


Figure 3: a) smear from embryonal rhabdomyosarcoma showing free clusters of small and massive pleomorphic cells. Smaller cells have high n:c ratio. Few cells with eccentric placed nuclei and dense cytoplasm are cited. Occasional tadpole formed cells also are visible (h&e; x40). B) section from embryonal rhabdomyosarcoma showing tumor cells in sheets and nests. Small cells with hyperchromatic round to oval nuclei and larger cells with eccentric nuclei and dense eosinophilic cytoplasm are stated (h&e; x40).

Table iii : distribution of malignant neoplasms

Type	No. of cases	%
Squamous cell carcinoma	47	69.11%
Malignant spindle cell lesion	8	11.76%
Metastatic ductal carcinoma of breast	5	7.35%
Malignant melanoma	4	5.88%
Embryonal rhabdomyosarcoma	2	2.94%
Meibomian carcinoma	1	1.47%
Extraskeletal plasmacytoma	1	1.47%

Histopathological correlation became feasible in all malignant, 52/189 (27.51%) of benign and 27/253 (10.67%) nonneoplastic lesions. Sensitivity and specificity of the diagnoses had been ninety five.31% and ninety seven.6%, respectively. The concordance among cytological and histological prognosis become noticed in all the malignant (one hundred%) and 50/52 (96.15%) of benign lesions.

DISCUSSION

Inside the contemporary generation wherein 'the needle is previous the scalpel' as surgical tissue biopsy becomes more and more expensive, it seems realistic to talk about the position and scope of fnac in diagnosing skin and gentle tissue tumors (3).

In our revel in, histopathological correlation changed into feasible in all malignant and 27.51% of benign neoplasms whereas the sensitivity and specificity of diagnosis was 95.31% and ninety seven.6%, respectively.

It was seen that biopsy supplied whole tissue details for accurate diagnosis; however, prognosis takes a longer time in comparison to the early diagnosis provided with the aid of cytology. But it is able to no longer be quite simply to be had, as is clear from this have a look at, in which 137 cases reported as benign neoplasm inside the

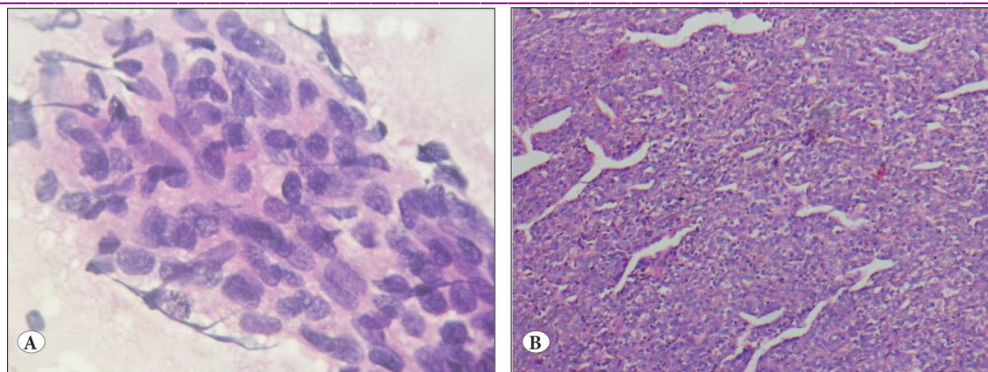
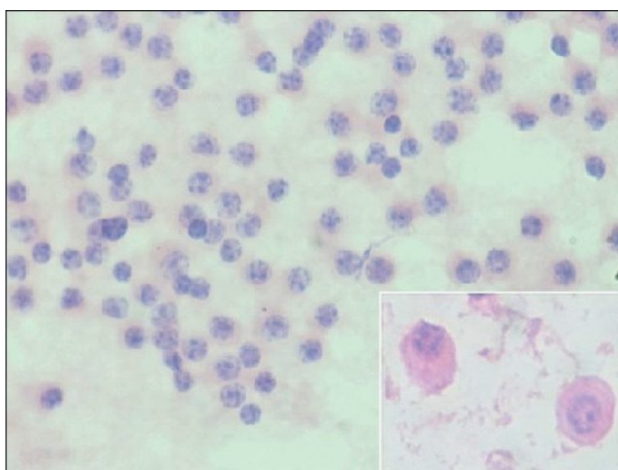


Figure 5: cellular smear from extraskeletal plasmacytoma showing diffuse population of plasmacytoid cells. Cells with eccentrically-placed nuclei having characteristic clock-face chromatin is proven within the inset (h&e; x40).



Discern 6: a) smear from malignant spindle cell lesion showing hypercellularity with clusters of moderately pleomorphic spindle cells.

Cells have spindly, elongated nuclei, coarse chromatin and scanty to moderate cytoplasm. Mitotic figures have been referred to in different part of the smear (leishman-giemsa; x40). B) sections from monophasic synovial sarcoma display sheets of spindle cells having oval to spindle nuclei and scanty inapparent cytoplasm especially inside the extra cell regions. A hemangiopericytomatous sample is evident in some regions (h&e; x10). Cytopathological report did not follow a request for biopsy.

The concordance between cytological and histological diagnosis become observed in all of the malignant (a hundred%) and 50/52 (96.15%) of benign lesions. As a consequence, a drastically high degree of concordance was completed amongst cytological and histological modalities of analysis.

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