

Pathology Summit 2018: Role of cell blocks preparation in fine needle aspiration in malignant lesions - Anju Pradhan - B.P. Koirala Institute of Health Sciences, Nepal.

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Introduction and objective: When diagnosing a neoplastic lesion from any area, fine needle aspiration cytology can provide a level indicating whether the lesion is benign or malignant. The preparation of the cell block will somehow mimic the histopathological sections, thus helping to also classify various neoplastic lesions. The objective of this research was to assess the diagnostic utility of the cell block in fine needle aspiration of malignant lesions.

Materials and methods: This is a prospective study based on the hospital conducted in the Department of Pathology, BPKIHS over a period of one year. A total of 41 cases; these were suspected or diagnosed as cases of malignancy in the FNA smear whose cell block and available histopathology samples were included in this study.

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Malignant skin lesions are common. Patients who develop squamous cell carcinoma and malignant melanoma often have recognizable precursor conditions. Some skin lesions resemble malignant tumors. Of particular concern are lesions that develop, spread or become pigmented, or those that occur on exposed areas of the skin. Knowing the similarities and differences between these lesions allows the attending physician to make a diagnosis in most cases by simple inspection and palpation. If in doubt, an excisional biopsy of small lesions or a perforating biopsy of larger lesions should be performed. Elimination of precancerous lesions will reduce the occurrence of malignant disease. Almost all skin cancers can be cured by early excision or destruction. For these reasons, physicians should be aware of the risk factors for skin

cancer, educate patients on risk reduction, and include skin inspection for precancerous and malignant lesions as part of health maintenance exams.

Primary neoplastic skin disease is common. Early recognition of these lesions is important because complete excision will cure almost all cases of skin cancer if done at an early stage. A presumptive diagnosis can often be made taking into account the patient's risk factors, the history of the lesion and its location, appearance and texture. The final diagnosis is made by histological examination of the biopsy samples.

Factors that Contribute to Skin Cancer:

Most primary skin neoplasms occur in skin exposed to adverse conditions. Ultraviolet light from the sun is most often a contributing factor. Desert sunlight is particularly dangerous, but water and snow both reflect a high proportion of ultraviolet light from the sky, increasing the risk for sailors, beach lovers, and winter sports enthusiasts. Among farmers and ranchers, the skin of the face, neck and arms is also at high risk.

Exposure to immunosuppressive drugs or ionizing radiation is a less common cause. The use of arsenic and organic tars predisposes to skin cancer. A history of malignant melanoma in a first-degree relative or the presence of numerous melanocytic nevi, which may be familial or sporadic, greatly increases the risk of developing malignant melanoma. 2-4 People with fair skin or freckles who do not tan are at increased risk. Dark hair and skin provide some protection against skin cancer. Family physicians should educate their patients about these risks and encourage them to protect their skin.

Skin lesions are brought to the doctor's attention in three ways: the patient can be aware of the lesion and consult the doctor about it; the doctor may notice the lesion

when examining the patient for another reason; or the doctor inspects the entire surface of the skin for lesions as part of a pre-employment or health maintenance examination. A complete skin exam is important especially in high risk patients because, at the stage where they are curable, skin cancers are painless and often not very visible. The top of the head, face, neck, shoulders and extensor surfaces of the arms are particularly important, but the areola, vulva and foreskin are also high risk areas. In black patients, the palms of the hands, the soles of the feet and the periungual areas are particularly vulnerable. A thorough description and extent of all apprehensive skin lesions should be documented in the patient's medical record.

Basal Cell Carcinoma

Comprising 60 percent of primary skin cancers, basal cell carcinoma is a slow-growing lesion that invades tissue but rarely metastasizes. Most metastatic basal cell carcinomas originate from large tumors. Basal cell carcinomas that have come back after excision may be at higher risk for metastasis. Basal cell carcinoma is common on the face and other exposed skin surfaces, but can occur anywhere. The common form first appears as a small thickened round or oval area. There is usually no itching, pain, or change in skin color. The area extends very slowly circumferentially, creating a slightly raised edge, which may have a shiny, pearly or slightly translucent appearance.

Basal cell carcinoma.

Basal cell carcinoma with characteristic shiny appearance. As the abrasion endures to grow, the dominant area becomes atrophic, leaving a hollow covered with thin skin, often with visible vessels, which eventually ulcers. The mounting edges convert more irregular and the shape converts uneven. The base is also invasive and gradually erodes the underlying tissue, making complete excision of the lesion difficult.

Basal cell ulcerative carcinoma.

Fewer mutual forms embrace superficial basal cell carcinoma that looks like a dermatitis patch, pigmented basal cell carcinoma that looks like nodular malignant melanoma, and aggressive growing basal cell carcinoma. Aggressive growing basal cell carcinoma is

an infiltrating sclerosing lesion that may resemble a scar with a firm or hard base. In patients under the age of 35, basal cell carcinoma tends to take the more aggressive forms.

Results: The smear was diagnosed in 93% of the cases while the cell block was diagnosed in 80% of the cases, the smear supplemented by an improved diagnosis of the cell block which reached 98%. The diagnosis of cell block confirmed that of the smear diagnosis in 56% of the cases. He established a specific diagnosis in 24% of the cases and therefore contributed in particular in cases where the smears were not diagnostic. Therefore, the CB was found to be superior to smears in these cases. The cell block was not confirmatory in 20% of the cases. The main non-confirmatory nature of the cell block was mainly due to the non-diagnostic performance of the cell block.

Conclusion: This study concludes that cell blocks have a synergistic effect on the diagnosis of conventional smears. In some cases where CS falls into the suspected category of malignancy, the blocks of cells can make a specific diagnosis.

Biography: Anju Pradhan is a consultant pathologist at B.P. Koirala Institute of Health Sciences (BPKIHS), Nepal. She completed her MD in 2008 at BPKIHS, Nepal. She is particularly interested in cytopathology, gastrointestinal and hepatic pathology and medical training. She also followed a short training course in cytopathology at Siri raj hospital, at Mahidol University and in Bangkok, Thailand in 2015, in adult and pediatric liver pathology at the university hospitals of Geneva, Geneva, Switzerland in 2016 and in problem-based learning in medicine, health. And behavioral sciences from the University of Maastricht, Maastricht and the Netherlands in 2012. She also works as coordinator of the MBBS phase I program.