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Role of liquid based cytology vs. conventional cytology in FNAC of abdominal masses

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The study was conducted to assess the role of Thin Prep, one of the FDA approved Liquid based cytology techniques in the diagnostic cytology work up of abdominal masses. We evaluated a total of 30 patients presenting with abdominal masses. The aspirate material was processed by conventional technique and by Thin Prep method and also rinsed into cell block fluid. The slides prepared from both the methods were compared by two independent pathologists. They were evaluated by comparing adequacy, cellularity, architectural pattern, cellular morphology preservation and background. Findings suggested that cellularity was more often higher in conventional smears than on Thin Prep slides (p value=0.025). Architectural pattern preservation was better on conventional smears (p value=0.001). Cytoplasmic preservation was better on conventional smears (p value=0.001), but difference in preservation of nuclear details was not statistically significant. The background in smears prepared by Thin Prep slides were significantly cleaner than direct smears (p value=0.001). Non epithelial elements like mucin and neurofibrillary tangles were better preserved on direct smears (p value=0.001), but diagnostic accuracy for both the methodologies showed no statistically significant difference (p value=0.226). The Liquid based cytology techniques utilize expensive equipment, reagents and they also generate certain morphological artifacts in slides with which a cytologist needs to get familiar. On using alone they might not consistently provide any added benefit in the work up of such lesions and should be employed as an adjunct to conventional smears. They may be preferred in situations where material needs to be transported or is required for ancillary tests.

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Vitamin B_{12} and folate deficiency status in a strict lacto-vegetarian population of Tharparkar

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Vitamin B12 and folate are essential for maturation of the red blood cells. B12 is only found in animal products, while folate is abundant in plants. Strict lacto-vegetarians are at high risk to develop vitamin B12 deficiency. After an ethical approval of Dow University of Health Sciences (DUHS), we carried a randomized, cross sectional, descriptive and analytic study at a Tharparkar village to observe the prevalence and subsequent hematological parameters due to deficiencies of these vitamins in 200 subjects (100 strict lacto-vegetarians, compared with 100 non-vegetarians). After a physical examination the blood samples were collected and sent to DUHS lab for serum B12 and folate levels and complete blood counts. The data were analyzed descriptively and statistically by SPSS 17 to calculate the Odds Ratios and p-Values. The mean age of strict-vegetarian group was 30.5 years (± 8.3) and non-vegetarian as 30.1 years (± 9.2). Male to female ratio was 3.4:1.0. Vit-B12 deficiency was found in 83% strict-vegetarian and in 66% of non-vegetarian group, low folate 7% in vegetarian versus 23% non-vegetarians and anemia in 36% vegetarians versus only 20% in non-vegetarian group. Definite high MCV was found in 30% vegetarians and 26% in non-vegetarians. Thrombocytopenia and leucopenia were unremarkable. It is concluded that vitamin B12 deficiency is predominantly found in the strict-vegetarians who also displayed alarming levels to produce neuropathy. The levels of folate were normal in the studied groups. Vitamin B12 supplementation is recommended in the high risk areas of Tharparkar.

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