Technical report

A fungal control block made easy

Beneragama DH

Introduction

Demonstration of fungus in tissue is a common requirement in histopathology practice. The presence of fungi can be suspected clinically or by the histological tissue reaction patterns (1). Detection of fungus by the routine Haematoxylin and Eosin stained sections is not very sensitive and can be easily missed. Therefore, Grocott / Gomori Methanamine Silver technique (GGMS) or Periodic Acid Schiff (PAS) stains are commonly used in the demonstration of fungus in paraffin sections. PAS stain demonstrates the fungus in most instances but it may not stain dead fungus or fungus such as Equine fungi-*Tricophyton, microsporum* spp (1). Both positive and negative controls should ideally be performed in parallel with each test. As the fungal elements in controls used from pathological tissue samples are sparse, finding controls for each test has become difficult and as a result sometimes the tests have to be performed without a positive control. A negative test without a parallel positive control will not exclude the presence of fungus.

This is an account on an easy, freely available source of material to prepare control blocks for the demonstration of fungus. Different types of mushrooms including the edible mushrooms, saprotrophic mushrooms found on decaying material and environmental fungi grown in decaying tissue samples were used. The mushrooms were sectioned transversely and longitudinally at the stem, processed with two pieces of normal tissue and

embedded sandwiched between two skin or tissue fragments. The environmental fungi were processed with the tissue base. GGMS stain and PAS stain were used to demonstrate fungal hyphae.

Discussion

Fungal hyphae stained positive with GGMS stain and PAS stain in all three instances and closely resembled the pathological fungus found in tissue sections. Hence Cooking Mushrooms and environmental fungi can be used as an easy, freely available source of material for preparation of control blocks for the demonstration of fungi in paraffin sections.

Fig 1. Mushroom stem (A) sandwiched between skin (B)(GMSSX10)

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Senior lecturer, Department of Pathology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka.

Correspondence: e-mail: dulani.ben@gmail.com

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Fig 2. Fungal hyphae of the mushroom (GMSSX40)

References

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