

# **FALSE NEGATIVE DUE TO PROZONE EFFECT OF STOOL OCCULT BLOOD TEST: A CASE STUDY**

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## **ABSTRACT**

The screening for colorectal cancer is the widely used preventive measure worldwide. The stool occult blood test is the simple test that is proven useful for this purpose. However, any test has limitation in diagnosis. In this short article, the authors present a case study on consultation of an abnormal aberrant laboratory result of false negative stool occult blood test in a patient with hemorrhoids. This problem is due to the prozone effect that disturbs the immunodiagnosis.

**KEYWORDS:** False, Positive, Stool Occult Blood.

## **INTRODUCTION**

The screening for colorectal cancer is the widely used preventive measure worldwide. The stool occult blood test is the simple test that is proven useful for this purpose [1]. However, any test has limitation in diagnosis. In this short article, the authors present a case study on consultation of an abnormal aberrant laboratory result of false negative stool occult blood test in a patient with hemorrhoids. This problem is due to the prozone effect that disturbs the immunodiagnosis.

## **CASE STUDY**

An aberrant laboratory result was consulted from a clinical endoscopist. The problem is an explainable stool occult blood screening test in a patient with hemorrhoids. The patient usually had active bleeding but the stool occult blood screening test never showed positive result. This case was investigated. The quality control of the

stool occult blood test is rechecked. The final problem is identified and due to prozone effect.

## **DISCUSSION**

Prozone effect is an important phenomenon seen in immunodiagnosis [2]. The disturbance of diagnosis by immunological technique is possible if there is an excessive antigen. The problem is common in seroimmunodiagnosis. For the stool occult blood test, some test kits are based on immunological principle. It is no doubt that the prozone effect can occur and lead to false negative result.

In the present case, it is overt that the patient has gastrointestinal bleeding due to hemorrhoids. A big amount of blood can be expected. This might mean that there are many antigens in stool occult blood test, hence, the false negative result can be expected.

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**CONFLICT OF INTEREST:** None

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