

**Review Article**

**The Declining Science And Art Of Clinical Examination- An Introspect**

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**Introduction**

Incidence of prediction of primary corporeal physical diagnosis depends on, a) data obtained from history taking (74% - 76%), b) signs noticed on physical examination (12% – 25%) and c) results of laboratory investigations (11% - 15%)<sup>1</sup>. This age old “search and seek” method for diagnosis has shifted to results of laboratory tests because physicians are more away from bedside and rely increasingly on diagnostic and laboratory tests even when such **foreys** produce clinical information that costs more and means less<sup>2</sup>. Moreover the illumination of these high profile diagnostic technologies in public domain has resulted in the **pri foreys mary** elements of diagnosis being followed in a reverse order and consequently led to a major erosion of “the science and art of clinical examination”<sup>3</sup>. This article illustrates a case series of errors in history taking, casual approach to clinical examination and irrational and injudicious use of laboratory investigations and the results thereof.

**CASE-1**

Fifty years old patient attended the surgical out patient department (OPD) with chief complains of bleeding per rectum since three months. She also complained of painful defecation and passage of hard stools. Her past history was insignificant. Her physical examination was normal. A per rectal (PR) examination was performed which revealed severe anal spasm. She was diagnosed as fissure-in-ano and accordingly conservative treatment was advised. She was asked to come for follow-up after fifteen days. The patient again attended the OPD after two weeks without relief of symptoms. On this occasion after having gone through her previous records she was again advised conservative treatment without any PR examination. Thereafter the patient went to a

local physician who intern diagnosed her having hemorrhoids sans PR examination and was advised a series of pre-operative investigations as a work-up for hemorrhoidectomy. The patient again returned to the OPD as she was not able to bear the operative cost in a private hospital. She was immediately sent for a pre-anesthetic check-up (PAC). After having cleared PAC she was admitted for scheduled hemorrhoidectomy. After her admission to the surgical ward she was subjected to a PR examination during daily ward rounds. PR revealed a mobile annular growth three centimeters from the anal verge and she was diagnosed as having carcinoma rectum. She underwent colonoscopy, biopsy and contrast enhanced computerized tomography of the abdomen. A diagnosis of well-differentiated adenocarcinoma grade-1 was finally made. She underwent abdomino-perineal resection. Her post-operative recovery was uneventful and she was discharged ten days after operation after stitch removal. She is doing well after one month and is still under follow-up.

**CASE-2**

A 32 year female patient attended a private clinic with painful jaundice, abdominal distension and fever with chills and rigor. Without further history taking and clinical examination an ultrasonography of the abdomen was advised. Sonography revealed thick walled gall bladder with multiple calculi, suspicious mass near fundus, pericholecystic oedema and dilated common bile duct. She was instantly referred to a cancer hospital where again without any further physical examination a battery of investigations was ordered. Complete haemogram revealed neutrophilic leucocytosis (total WBC count 15900/cmm, Neutrophil – 88%), normal fasting (98 mg %) and postprandial (104 mg%) blood glucose report. Her liver functions (LFT) revealed a picture

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of obstructive jaundice (direct bilirubin 10 mg%) with normal liver enzymes and raised alkaline phosphatase. She underwent another ultrasonography of the abdomen which revealed thick walled contracted gall bladder dilated common duct (CBD) with stones and mild ascitis. The ascitic fluid was sent for cytological analysis and staining for malignant cells which proved to be negative. An endoscopic retrograde cholangio-pancreatography was done. Numerous large gall stones were detected but could not be removed. Large sized plastic stent was inserted in the CBD. Computerized tomography of the abdomen was advised which showed multiple gall stones, CBD stones with stent-in-situ, mild ascitis and omental and mesenteric thickening. With the above reports the patient attended our OPD. We examined the patient clinically whose physical findings were unlikely for malignancy. A fresh USG revealed gallstones, dilated intrahepatic biliary radicals, dilated CBD with stones and stent inside. There was no evidence of ascitis. A repeat LFT was within normal limits with raised alkaline phosphatase.

A decision for exploratory laparotomy was taken. At operation the findings were consistent with type III Mirizzi's syndrome. Cholecystectomy with choledochoplasty after removal of stent and stones was done. Post-operative recovery was uneventful. The patient was discharged fourteen days after operation after stitch removal. Histopathology of the specimen was consistent with chronic cholecystitis. The patient is doing well at six months follow-up.

### CASE 3

Twenty five years old female patient attended a private gynecologic clinic with the chief complaints of left sided breast lump since two months. The lump was slowly increasing in size associated with pain and tenderness during menstruation. She was examined by the gynecologist and a diagnosis of fibroadenoma was made. She was ordered base line hematological investigations, chest roentgenogram and electrocardiography. These were within normal limits. The patient was subjected to operative treatment where the lump was excised and sent for histopathology. Histopathology report revealed intraductal adenocarcinoma with involved surgical margins. She was referred to surgical OPD of medical college for further management. At presentation the patient had a five centimeter circum-areolar scar. No lump was palpable but she had mobile apical, central and anterior axillary lymph nodes. Other systems were normal. A provisional diagnosis of breast carcinoma

(T4, N1, M0) was made. She underwent three cycles of neo-adjuvant chemo-therapy and was put up for modified radical mastectomy as a part of our institutional protocol. Post operative recovery was uneventful. Postoperative histopathology was consistent with intraductal carcinoma with twelve out of fifteen resected nodes being involved. Immunohistochemistry revealed her to be ER/PR positive but Her 2 negative. She was further referred to medical oncology where she is currently under follow-up.

### Discussion

A good history is the bedrock of any physical diagnosis. It signals the clinician what to look for in physical examination. The panoply of data and repositories of information obtained from a precise and accurate history and physical examination can lead to a diagnostic resolution to the extent of 90%<sup>1,2</sup>. Conversely the colossal increase in the workload of ancillary service departments shows vividly how dependent we have become on laboratory investigations<sup>4</sup>. The diagnosticians are thus robbed of a rich source of physical evidence.

In recent days there has been a shift in the emphasis from clinical tools to high tech ancillary medicine<sup>5</sup>. The generalized perception among physicians when it comes down to physical diagnosis, the name of the game, is which laboratory tests to order. The laboratory results are assumed to be correct with little or no discussion about their sensitivity or specificity. Thus the very basis of the profession is being challenged and clinical acumen and reasoning are being traded for technology. The current medical curriculum has also laid increased emphasis on medical technology and consequently the bedside skill has languished<sup>6</sup>. History taking has thus become a "declining art". A glance at most of the clinical notes reveals the data to be erratic with no line of reasoning and moving from one issue to the other. As such the information gathered is vague and incomplete. This "scatter-shot" approach leads to an unfocused and fragmented representation of the problem<sup>7</sup>.

The cases described above highlights three different aspects of common errors performed by surgeons. Whereas the first case vividly points to the primary importance of performing per-rectal examination for rectal pathology, the second and third case is a nar-

ration of unjustified use of laboratory examination and improper use of surgical exercise without proper patient examinations and investigations. All these effects culminating to increased cost, patient harassment and at times leading to “suicidal” litigation. A structured approach to foundation of diagnosis should include focused and meticulous history, focused and confirmatory physical examination ending with a parsimonious ancillary investigation<sup>8</sup>. Approach should be well organized, elaborate, coherent, clearly elucidating the medical denotations with well organized and rich network of semantic

association to process clinical findings ending with an appropriate and justified laboratory investigation.

The achievement of this goal could be realistic if the following issues are well addressed, a) more time spent on history taking; b) more emphasis on teaching students how to perform judicious clinical examination; c) more emphasis on research into communication with patients rather than on development of new laboratory services and d) appropriate planning of medical curriculum<sup>9-10</sup>.

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