Peroperative Cholangiography - Karachi Experience

Pages with reference to book, From 206 To 209

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Abstract

The results of peroperative Cholangiography (P C) were evaluated at six centres in Karachi. In four centres P.C. was done routinely. Pooled results showed that 14.8 percent of 222 cases bad such exploration and 12.1% yielded stones. I.n two other centres P.C was employed selectively for cases with a 'relative' clinical indication for duct exploration, pooled results showed that 16.6% of 253 cases had ducts explored and the positive yield was 12.3%.
As compared with the results of duct exploration on clinical ground alone, a practice in one of the centres (prior to employing routine P C) it was found that rate of stone retrieval from ducts explored on the basis of P C was much higher (JPMA 34 : 206, 1984).

Introduction

Gall stones are a common problem in Karachi and a small percentage of cases have stones in the common bile duct. As common duct exploration is associated with significant morbidity and higher mortality (6.6%) as compared with simple' cholecystectomy (1.8%), it is important to reduce rhe rate of negative duct exploration[1]. The high positive yield of duct exploration on the basis of P C findings is now well recognised[2].
The aim of the present study was to compare the results of exploration of the common bile duct following P C with those where ducts were explored using clinical criteria alone and further to compare the results of routine versus selective cholangiography.

Material and Method

Retrospective data was collected from six different hospitals in Karachi (SITE, 7th Day Adventist, Holy Family, Civil hospital and Naveed clinic). All the patients had cholecystectomy and depending on the basis of duct exploration were divided into three groups. In the first group (270 cases), duds were explored using clinical criteria alone.
In the second group (220 cases), common ducts were explored on the basis of routine cholangiography finding.
In the third group (253 cases), ducts were explored on the basis of selective cholangiography finding (Table 1).

Table – 1

Particulars of Individual Series.

	Surgeon	Hospital	Period of Study	No. of Cholecys-tectomies
1. CBDE on clinical basis	Haziq Y.	K.V. Site	1971–80	270
II–A Routine PC	Haziq Y.	K.V.Site	1981–82	75
	Moiz	Liaquat National	1978–82	55
	P. Tung	7th Day	1981–82	47
	Mushtaq A.	Ziauddin	1979–82	45
II–B Selective PC	Naveed S.	Naveed	1975–82	194
	J.Talati	Holy Family	1981–82	59
			Total:–	745

Working conditions were also evaluated in the six hospitals involved. A standard P C technique3 was employed. Two films (occasion. ally more) being. taken after the injection of 3-8 ml. of the contrast medium through a cannula placed in the cystic duct.

The clinical criteria for duct exploration included cholangitis, palpable stones and positive intravenous Cholangiogram (absolute indication), jaundice, dilated duct, small stone and pancreatitis (relative indications). Cholangiography was employed selectively when 'relative' clinical indications for duct exploration existed in other words when absolute indications were present, ducts were explored without recourse to PC. P C's were considered normal when a normal calibre common bile duct, free flow of dye into duodenum, narrow terminal segment, absence of filling defects and inexcessive retrograde

filling of intrahepatic radicles were displayed.

Results

The patients in the three groups were similar in regard to age, sex and incidence of Jaundice and pancreatitis (Table II).

Table–II
Patient Characteristics in Three Groups.

	Clinical 1. (%)	R P C II. A (%)	SPC II.B (%)
Age 30–49	64.8	63.5	58.4
Females	86.6	86.4	89.3
Present/Past Jaundice	12.6	12.8	12.6
Pancreatitis	0.0	3.6	1.4

In the first group 270 cholecystectomies were done and 29(10.7%) ducts were explored using clinical criteria alone, a practice in one of the centres (prior to employing routine P C). Stones were recovered in 9 cases, a retrieval rate of31%. In the second group routine P C was done in 222 cases, the common duct was explored in 33 cases and 27 yielded stones (82.5%). The positive yield was uniformly high in the four participating centres i.e. between 71 and 100% Between 22 and 70% of the patients would have had negative duct exploration if clinical criteria alone had been used. The other advantage of routine P C in this series was the pick up of abnormalities other than stones. In one case fifing defects seen on P C, proved to be polyps on exploration. In another cases a filling defect was caused by a disintegrated piece of. gall bladder carcinoma. One P C showed an anamolous cystic duct opening into right hepatic duct.
In the third group émplbying selective cholangiography, 42 ducts were explored in a total of 253 cholecystectomies, 31 ducts yielded stones. The rate of duct exploration was between 14 to 22 % in the two participating centres. There was a positive yield of between 69 and 76%. Some 60 to 80% patients were saved negative duct exploration.

Discussion

Prior to the introduction of P C the. decision to explore the common bile duct was based on the clinical symptoms and the intraoperative anatomy. This led to many unnecessary explorations.[4] With wider use

of P C many patients with clinical indications for duct exploration are spared unnecessary choledochotomies.[5] However, there is continuing controversy on whether P C should be done routinely or selectively. Routine P C has been advocated because it is useful in detecting unsuspected small ductal stones and in detecting ductal anomalies.

Unsuspected duct stones have been reported in 1.22 - 14% of patients and ductal anomalies in as many as 21 .9% of patients.[6]

Surgeons arguing against the routine use of PC emphasize a low incidence of unsuspected duct stones, un-necessary common duct exploration resulting from false positive cholangiograms and the overall added expense of the procedure.[7]

The overall age distribution shows that the peak incidence of gall stones diseases in Karachi was in fourth and fifth decades which is some what lower in the West[8].

The collective Karachi experience with routine P C compares favourably with results of this procedure elsewhere. We were exploring 15% of the ducts, the range elsewhere has been between 10 and 29%, a positive yield of 81.8% in this study is a little higher than the 66% reported elsewhere[9]. The other advantage of the routme P C in the present series has been detection of unsuspected abnormalities other than stones, e.g. polyps in common duct, migrating tumor from carcinoma of gall bladder and anamolous cystic duct opening into the right hepatic duct.

Analysis of the overall result of common duct exploration in these groups showed that where as the rate of duct exploration and positive yield was similar when routine and selective cholangiography were employed, positive yield was much lower when ducts were explored without the help of cholangiography. In conclusion it is suggested that significant improvement in the stone retrieval has occurred with the introduction of peroperative cholangiography.

Selective cholangiography saves time, cost and radiation exposure while routine cholangiography picks up unsuspected abnormalities.

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