胆囊收缩素总攻排石疗法对胆道运动影响的初步观察

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内容提要　通过观察 51 例胆道排石汤、脂肪餐、吗啡、电针和胆囊收缩素对胆道运动影响的临床效应；制订由胆道排石汤、33%硫酸镁、0.5% 稀盐酸和胆囊收缩素组成的“胆石症 CCK 总攻排石方案”，经 15 例临床验证有良好的排石效果。

胆石症的治疗至今仍是国内外学者致力研究的重要课题。在碘番酸显影条件下通过观察胆道排石汤、脂肪餐、吗啡、电针、胆囊收缩素(Cholocystokinin, CCK) 等对胆囊运动的影响，研究胆石症中西医结合 CCK 总攻排石疗法的临床意义，现将初步结果报道如下。

观察对象和研究方法

选择临床上无黄疸的、反复发作右上腹疼痛、近期胆囊造影显影清晰的患者 66 例，其中胆石症 40 例，胆囊炎 26 例；男 27 例，女 39 例；年龄 23～59 岁；病程 2～6 年，中医辨证，气(肝)郁型 45 例，湿热型 21 例。

每例均按口服胆囊造影常规准备，服碘番酸 4.5g 后 14 小时摄 X 线片，作为观察药物应用前的对照资料。66 例分成四组：(1)20 例(其中 10 例胆石症)作 CCK (5.4mg 肌注) 和脂肪餐(二枚油煎鸡蛋)的缩胆效应自身对照，二种试验平均间隔 5 天，用药后均在 3′、8′、13′、18′、23′、28′、33′、60′ 摄片；(2)20例(其中 9 例胆石症)作胆道排石汤 (200ml 口服) 缩胆效应观察；按上组间等时间摄片对照，其中 5 例服药后 60′ 皮下注射吗啡(5mg)，尔后15′、30′ 90′ 摄片；(3)11例 (其中 6 例胆石症) 胆道排石汤 (200ml) 服后 15′ 摄片，并皮下注射吗啡 (5 mg)，尔后15′、30′、60′ 摄片；在 60′ 时，5 例肌注 CCK(5.4mg)，6 例电针日月、胆俞，均在此后 30′、60′ 摄片；(4)15 例作胆石症 CCK 总攻排石治疗 (见附表)，其中 10 例在碘番酸胆囊造影条件下进行。均于胆道排石汤服前、服后 40′、硫酸镁服后 10′、稀盐酸 服 后 10′、CCK 肌注后 30′、60′ 各摄一片。

附表　胆石症 CCK 总攻排石方案

时间	措　　施		
8 :00	胆道排石汤或总攻辨证方	200ml	口服
8 :40	33%硫酸镁	40ml	口服
8 :50	0.5%稀盐酸	30ml	口服
9 :00	CCK	5.4mg	肌注

CCK 应作皮试，阴性可用作肌注。

胆道排石汤的组成为：金银花 30g　茵陈 60g、金钱草60g、槟榔30g、枳壳15g、大黄30g、芒硝 6 g(冲服)，加水 500ml 煮沸浓缩 200ml。

在上述定时连续摄片时，用铅橡皮遮挡患者躯体，仅暴露胆系区域，保持同一右后斜位，避免体位变动引起胆囊投影面积改变，影响对比性。胆囊面积用 Siffert 方法计算。

结果与分析

CCK、脂肪餐自身对照20例与胆道排石汤 20例的胆系图象分析，胆囊最早收缩时间（以45%以上的病例胆囊面积收缩超过20%，为衡量标准)：CCK是 8′，脂肪餐是23′，胆道排石汤是33′。胆囊最大收缩时间(以 50%以上的病例胆囊面积收缩超过30%，为衡量标准)，CCK是23′，脂肪餐是 33′，胆道排石汤是60′。在胆囊最大收缩时间内，总胆管的显影率：CCK是 90%，脂肪餐是 40%，胆道排石汤是 30%。

缩胆强度、速度和总胆管显影率，CCK与其它二者比较，差异显著，P＜0.02～0.001。应用CCK后，X线片上明显可见胆囊结石由底、体向颈部移动。

观察胆道排石汤服后15′(11例)和60′(5例)应用吗啡引起胆囊增大的作用，以前者为佳。从用吗啡60′片分析，胆囊增大30%以上，前者有9例(占82%)，后者为3例(占60%)；90′片胆囊面积并未继续增大，与60′片相同大小，这提示存在两个可能：(1)胆道排石汤利胆作用[1,2]持续约60′左右；(2)吗啡使胆道口括约肌痉挛引起胆道内压升高到一定程度，抑制了肝脏的泌胆作用，故胆囊不再胀大，内压亦不再升高。

11例胆道排石汤服后15′用吗啡，其后60′，有5例用CCK，6例电针。CCK30′片胆囊面积缩小50%以上，60′片胆囊面积未再缩小。电针30′、60′片与针前无差别。可见电针拮抗吗啡的作用是很弱的，CCK虽能拮抗吗啡，但持续时间比较短。

根据上述胆道动力学观察的结果，可以为制订"胆石症CCK总攻排石方案"提供参考。10例在胆囊显影条件下观察总攻排石胆道运动，片上胆囊面积随着硫酸镁、稀盐酸和CCK的使用逐渐缩小，尤在CCK用后30′胆囊面积骤然缩小50～70%以上，胆石的阴影向胆囊颈部移动和减少；患者阵发性腹痛、腹泻、漂洗粪便均有米粒大小胆石检出。另有5例未作造影观察，其治疗结果相仿。曾有1例，在总攻后临床症状加重，频发右上腹痛，终经手术取出嵌顿胆囊管结石1枚0.8×1.0cm。

讨　论

"胆石症CCK总攻排石方案"中，胆道排石汤起利胆及清热解毒作用；0.5%稀盐酸具有刺激十二指肠及上段空肠粘膜释放内源性CCK和胰泌素(Secretin)的作用。CCK能促进胰酶和胆汁分泌、胆囊收缩和胆道口括约肌松弛、小肠和结肠蠕动。国产CCK(江苏泰州产品)亦具有天然CCK的作用[3,4]，在兔胆道平滑肌电活动上有拮抗吗啡的作用[5]。Secretin具有促进胰液和胆汁分泌的作用，并能协同增强CCK的缩胆囊作用。在"总攻排石"方案中，在稀盐酸等刺激APUD细胞释放内源性CCK和Secretin基础上，加用外源性CCK，可在药理学上起到加强作用，迅速有效持久地促进胆汁、胰液大量分泌，强力地收缩胆囊，引起有力的排胆活动，促使胆石和炎症产物通过松弛了的胆道口括约肌向肠腔排出。

综观CCK总攻排石治疗15例胆石症的结果，启示中西医结合总攻排石的治疗，宜从胆道的病理生理学与药物动力学等诸方面着手研究，来组织各项治疗措施以提高疗效。CCK作为机体的一种生理活性物质，如何更好地用于治疗胆石症，有其深入探讨的意义。

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Preliminary Observation on the Effect of Cholecystokinin on Biliary Tract Movement in Combined Stone-Expelling Methods

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Effects of herbal decoction "Dandao Paishi Tang" (Biliary Lithagogue Decoction), fatty meal, morphine, electroacupuncture and cholecystokinin (CCK) on motor function of the gallbladder were observed in 51 patients undergoing oral cholangiography with iopanoic acid. The speed and intensity of gallbladder contraction were found significantly higher when treated with CCK than with fatty meal and herbal decoction, $P<0.02$—0.001. Spasm of the Oddi's sphincter induced by morphine, which could only be weakly antagonized by electroacupuncture, could be antagonized by CCK, though transiently. A regimen of expelling stones was designed as a combination of herbal decoction "Dandao Paishi Tang", 33% magnesium sulfate solution, 0.5% hydrochloric acid solution and CCK. Satisfactory stone-expelling results were seen clinically in 15 cases. CCK was considered valuable in the treatment of cholelithiasis.

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The Effect of Radix Ophiopogonis and Small Dose $MgSO_4$ on Hemodynamics, Arrhythmia and Extent of Myocardial Infarction in Coronary Occluded Dogs

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The effect of Radix Ophiopogonis and small dose $MgSO_4$ on hemodynamics, arrhythmia, and extent of myocardial infarction were studied in 18 open-chest anesthetized dogs. The results showed no change of BP but slight increase of EF dp/dt and decrease of HR oxygen consumption. Arrhythmia was found significantly reduced in the treated group than in the control group 6 and 12 hours after infarction. The ultimate infarct extent after 24 hours was significantly reduced in the treated group.

It was shown that Radix Ophipogonis combined with small dose of $MgSO_4$ could prevent arrhythmia after myocardial infarction, reduce oxygen consumption and limit the extent of myocardial infarction in experimental animals.

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A Preliminary Study of the Effects of the Bufonin Preparation on Immunological Functions

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It has been reported that bufonin has anti-inflammatory, anti-infectious and some anti-leukemic effects, but its mechanism remains to be elucidated.

Injection of aqueous bufonin preparation into Kunming, C57BL strain mice for 13 consecutive days has been found to increase the activity of plaque forming cells (PFC) in comparison with the control groups, indicating that it has a stimulating effect on B lymphocytes. It has no effect in vitro on E rosette forming activity for normal human lymphocytes, but an addition of 50 or 100μg of the preparation to the medium can restore rosette forming capacity of the lymphocytes inhibited by aggregated IgG, although without statistical significance. Furthermore, the preparation can stimulate in vivo the phagocytic activity of peritoneal macrophages in C57BL and IRC strain mice, as well as increase their serum lysozymes activity.

These preliminary results suggest strongly that the bufonin preparation might have displayed the actions through certain immunological mechanism.

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