



Risk of Unnecessary Gall Bladder Surgery

PA-PSRS has received three reports of attempted cholecystectomy in patients who had previously had their gall bladders removed. In each case, the patient was misdiagnosed with cholelithiasis following symptomatology consistent with this diagnosis as well as an ultrasound read as positive for gallstones. All three patients' previous cholecystectomies did not become known until their surgeries were performed.

These cases share several characteristics that suggest potential risk factors for this type of problem:

- All three patients were of **advanced age**, with the youngest being over age 80.
- All three patients were **poor historians** and could not inform their clinicians definitively that they had previously undergone cholecystectomy. In one report, the patient suffered from Alzheimers-related dementia, and the other two reports indicate that family members were involved in providing the patient history.
- In each case, either the patient or a family member expressed **uncertainty** about a prior cholecystectomy.
- All three reports cite an **ultrasonogram** that was read as positive for cholelithiasis.
- In one case, the patient had a history of **unrelated prior abdominal surgery** that could have explained a visible surgical **scar** without necessarily alerting the surgeon to a likely prior cholecystectomy.

An extensive search of the clinical literature failed to identify any published reports of attempted cholecystectomy in patients with prior gall bladder removal. However, the literature contains a number of case reports of misdiagnosed cholelithiasis or cholecystitis and attempted cholecystectomy in patients with a rare congenital anomaly in which the gall bladder fails to develop (known as agenesis).¹⁻⁵

While these cases are fundamentally different from those reported to PA-PSRS, they document the potential for false-positive results not only from ultrasound but also from cholescintigraphy. A small, con-

tracted gall bladder—which often accompanies gallstones—can be difficult to visualize on ultrasound.⁶⁻⁷ Similarly, complete inability to visualize the gall bladder in cholescintigraphy usually indicates acute cholecystitis, often secondary to gallstones.⁸⁻⁹

In followup, the Patient Safety Officer (PSO) from one facility informed us that in retrospect, their clinicians may have mistaken a loop of bowel for the gall bladder, while another facility's PSO believes the hyperechoic surgical clips from the patient's previous surgery were mistakenly interpreted as gallstones. A possible contributing factor to the misdiagnosis was that the radiologist was not informed of the uncertainty about the presence or prior surgical removal of the gall bladder.

In one case, the patient had recently had a chest CT performed for a comorbid condition, which showed surgical clips in the upper right quadrant. A history of prior gall bladder removal noted on a consultant's report as part of a comprehensive workup was not reconciled with the clinical diagnosis.

We contacted the PSO from each facility, and they could not confirm in any of the three cases whether the ultrasound technician or the radiologist were aware of any uncertainty about prior cholecystectomies. We cannot know, of course, whether these patients' sonograms might have been interpreted differently had this information been available.

Suggestions that may help to avoid similar problems in the future include:

- Understanding the risk factors outlined above.
- Pursuing uncertainty about possible prior re-

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Risk of Unnecessary Gall Bladder Surgery (Continued)

removal of a potentially diseased organ.

- Ensuring that radiologists and technicians are apprised of any uncertainty about prior organ removal.

PA-PSRS has also received two additional reports of patients with prior gall bladder removal whose imaging studies were read as positive for cholelithiasis. However, these patients helped to avert unnecessary surgery by speaking up and correcting the misdiagnosis. The patients in these cases were markedly younger than those in the cases described above and were not poor historians.

Notes

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