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Cholecystostomy Outcomes from a Single Centre During the COVID-19 Pandemic Highlight the Need for Robust Local IR Pathways

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To the editor,

The peak of the COVID-19 pandemic saw shifts from regular patterns of surgical practice across the UK. One such example was the management of acute cholecystitis. NICE [1] guidance advises early laparoscopic cholecystectomy for acute cholecystitis unless surgery is deemed too high risk or conservative management fails, in which case gallbladder drainage is to be considered. During first wave of the pandemic, this guidance was replaced with intercollegiate guidance recommending against the use of "hot" cholecystectomies and favoured management with antibiotics and gallbladder drainage where necessary. As a result, our unit saw an increase in cholecystostomy use from 2.9% of gallbladder admissions in 2019 to 4.9% in 2020, various units around the country report rates ranging from 7.2% [2] to a considerable 26% [3]. Interestingly, during the peak of the pandemic, the use of interventional radiology (IR) procedures decreased by 31%; however, the rate of IR cholecystostomies increased by 66% [4]. Here we report a retrospective analysis of the outcomes of patients treated with IR and surgical cholecystostomy during the COVID-19 pandemic at our centre focussing on readmissions and time to definitive management. In 2020, we performed 15 cholecystostomies (6 surgical and 9 IR) with significantly more IR procedures when compared to 2019 ($p = 0.02$). Notably, one patient underwent surgical cholecystostomy due to IR services being unavailable when required, 2/6 were not fit for further surgery and the remaining three were failed laparoscopic cholecystectomies from early in the pandemic. In the IR group, four were frail and unfit for surgical intervention and five were purely COVID related. Four of the surgical patients were readmitted, all for infection with two patients having another unrelated admission for drain-related pain, leaving a total of six. The IR group had only three readmissions, one for tube displacement, one for pain, and only one for infection. With our IR rate of 33% being slightly lower yet not hugely dissimilar to the 42.5% readmission rate seen by Peckham-Cooper et al. [2] in similar patients. With regard to definitive treatment, 3/6 surgically drained patients underwent a second surgery with two subtotal cholecystectomies and one total cholecystectomy with a mean time to definitive treatment of 27.5 weeks. From the IR group, four underwent a second procedure, two total cholecystectomies and one subtotal cholecystectomy with the fourth procedure cancelled due to extensive adhesions. Mean time to definitive treatment was 20.25 weeks in the IR group. In conclusion, we have seen in our centre that IR cholecystostomy results in reduced readmissions, especially from infection with 1/9 IR drains compared to 4/6 surgical drains. Patients who underwent IR cholecystostomy were also more likely to have a total cholecystectomy as their definitive treatment. IR cholecystostomy resulted in a shorter time to definitive treatment, potentially reflecting a more favourable clinical state of such patients. However, we observed that troublesome adhesions were found in all cases of subtotal cholecystectomy following either method. It is also worth noting that only one of the four frail patients undergoing IR cholecystostomy had a subsequent gallbladder-related readmission. Now as life and practice return to something resembling normal, we would agree

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with Peckham-Cooper et al. [2] that laparoscopic cholecystectomy should return to the forefront when indicated especially since the CHOCOLATE trial [5] showed significantly fewer complications in "high risk" patients undergoing laparoscopic cholecystectomy vs percutaneous drainage; however, guidelines are yet to reflect this. To conclude, IR cholecystostomy was a viable and lifesaving procedure during the pandemic and proved superior to its surgical counterpart in our centre, highlighting a governance need for robust local IR pathways to ensure access to this procedure when required.

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