

aluminum sheet could be identified as a high-density linear shadow.³ In this case, we retrospectively reviewed the X-ray and could identify the PTP, including the tablet at the hepatic flexure (Fig. 1a). In cases where a tablet is not pushed out, low-density air can be trapped in the PTP surrounding the high-density tablet. If a tablet is radiopaque, a typical CT image, such as in the current case, can be observed (Fig. 1b). However, in cases where a tablet has been pushed out, it is more challenging to identify the PTP. PTP materials have different radiopacities. For example, it is often possible to identify polyvinyl chloride, whereas identifying polypropylene is difficult, and cycloolefin copolymer is usually slightly visible.⁴ In the present case, the PTP was made from polypropylene and was difficult to identify in the CT images (Fig. 1b).



In conclusion, if an older patient with cognitive decline presents with a sore throat and/or abdominal pain, clinicians should consider the possibility of accidental PTP ingestion. The abdomen should be examined and a CT scan be carried out.

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Individualized approach to reconsider perioperative do-not-resuscitate orders in frail older patients

Keywords: geriatric medicine, perioperative DNR order, surgery.

Dear Editor,

The Western population is aging, leading to an increasingly frail and older population.¹ In the Netherlands and many other countries, it is common practice to discuss do-not-resuscitate (DNR) decisions.^{2–4} As such, frail older individuals often have a DNR order, while still frequently undergoing surgery near the end of life.^{5,6}

A commonly held perception is that resuscitation in the operating room (OR) is more successful than out-of-hospital settings and therefore a waiver of pre-existing DNRs should be considered. A recent review showed that survival after resuscitation in the OR is between 32% and 56% within the first 24 h, with 45%–67% of survivors having a favorable neurologic outcome.⁷ Only one study reported on survival in older individuals (>60 years), showing a 24-h survival rate of 32%.^{7,8} Based on these numbers it can be assumed that frail older individuals have at best similar, but likely even worse outcomes. These statistics pose an important challenge on how to deal with DNR orders perioperatively. Should they be suspended temporarily? What are the possibilities to reach a decision that best represents the patient's interests?

Here, we illustrate a few key points in this debate with a case that is common in daily practice.

A 95-year-old woman, with a history of advanced dementia and a prehospital DNR order for 8 years, presented to the emergency department with a femoral head fracture. After consultation, the patient and surrogates decided to opt for surgery, but no specific agreements with regard to suspension of the DNR order were made. Perioperatively, she developed sudden cardiopulmonary arrest caused by massive pulmonary emboli. After unsuccessful resuscitation for 64 min she was declared deceased. The family was informed and although at peace with the loss of their loved one, they were shocked about the course of events within the OR, claiming “She would not have wanted this.” Three months later, the family's shock had not subsided, and were considering a formal complaint.

This non-standalone case raises several issues on perioperative DNR orders. There are several commonly used strategies when perioperative DNR orders are evaluated, that often coincide in clinical practice.

- I. DNR order is always suspended, or adhered to at all times, during surgery.⁹
- II. DNR order is suspended for 24–48 h.
- III. A perioperative DNR conversation about individualized agreements on how to deal with resuscitation during surgery.

Table 1 Questions to help raise awareness and come to a decision regarding the do not resuscitate order

Questions	
Goals of surgery	Curative intent Life-extending in the palliative phase Improving quality of life in the palliative phase
Factors influencing long-term outcome	Cause of resuscitation Comorbidity Frailty
Patient's/surrogates' perspective	Expectations Wishes Preferences

All these strategies have advantages and disadvantages. In (i) this seems straightforward and in theory the patient and surrogates are optimally informed about what to expect in case of cardiopulmonary arrest. (ii) This attempts to customize the suspension of the DNR order while maintaining clarity for the first 24–48 h. However, this option quickly requires another plan after first stabilization. The major disadvantage of these first two options is that the individual patient's values are not considered, which may result in unwanted resuscitation attempts, resulting in further disabilities and prolonged dying. They also leave little room for interpretation regarding specific clinical circumstances (e.g., iatrogenic adverse events that can be easily reversed in the controlled setting of the OR). In addition, these options may neglect potential cognitive impairment of the older patient, which may be worsened at the time surgery is urgently needed. Furthermore, emotional stress places an additional burden on surrogates if they are actively involved in decision making. As such, we believe option (iii) presents as best practice, even though it is time-consuming and even the best attempt to run through the possible scenarios will not cover them all. Nevertheless, we believe that perioperative DNR conversations are vital in respecting the patient's autonomy and avoiding discordance among involved physicians.

Cohen and Cohen proposed the principle of “required reconsideration,” recommending consistent re-evaluation of the subsidiarity and proportionality of the upcoming surgery and the consequences possible resuscitation may bring.¹⁰ In line with this, we propose that all older individuals with a DNR order that undergo surgery visit a geriatrician preoperatively to weigh the advantages of the proposed surgery in the light of the existing DNR order, the goals of the surgery, factors influencing long-term performance and most importantly the patient's perspective (Table 1). Ideally, these findings will be integrated in to a multidisciplinary meeting (or brief deliberation in urgent cases) in which a perioperative advance care plan is made and discussed with the patient.

By saving lives, the potential value of resuscitation is self-evident to many. Although resuscitation in the OR can prevent premature death, it may lead to severe disability that must be avoided at all times. Therefore, we believe careful (re)consideration of the DNR order, on an individualized patient-centered basis, that includes an elderly care specialist, will improve perioperative care.

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