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TITLE WHEN DO POSTOPERATIVE COMPLICATIONS OCCUR? A PROSPECTIVE STUDY OF 20,802 PATIENTS.

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In recent years many studies of mortality and morbidity in relation to anesthesia have described the frequency of complications and associated risk factors. The aim of this study was to describe at which time the postoperative complications occur.

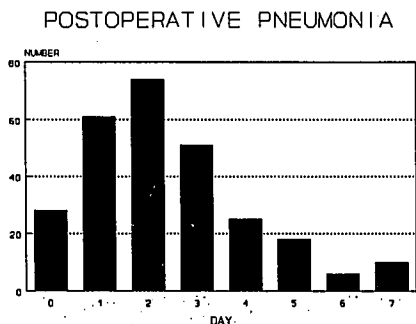
Methods: The study, which was approved by local ethics committees, was carried out during 17 consecutive months in 5 Danish hospitals. All in-patients aged 18 years or older, whether scheduled for elective or emergency operations, regional or general anesthesia except for thoracic and neurosurgical procedures, participated in the study. All gave informed consent. The selection of anesthesia and all pre-, intra- and post-anesthesia treatment and other monitoring modalities were kept as customary in the participating hospitals. Specially trained personnel recorded the presence of 15 pre-defined complications on the day of discharge or at latest on the 7th postoperative day.

Results: This study presents the time profile of 15 postoperative complications. We found one or more postoperative complications in 5.2% of the 20,802 patients.

The table shows some of the registered complications and the median day of appearance.

complication	No	complication rate	median day
Cardiac failure	101	0.5	2
Myocardial infarct.	24	0.1	1
Pneumonia	272	1.3	2
Pulmonary oedema	31	0.2	2
Atelectasis	149	0.7	2
Cerebral stroke	23	0.1	3
Pulmonary embolism	22	0.1	3

The diagram shows the time profile of the complication pneumonia.



Conclusion: In this study we demonstrated at which time 15 of the most common postoperative complications occur. Most of the cardiac and pulmonary complications occurs within the first 3 days.

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Title: EYE INJURY ASSOCIATED WITH ANESTHESIA: A CLOSED CLAIMS ANALYSIS

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Introduction: Eye injury is an uncommon complication of anesthetic care, but its consequences can be devastating. We examined the ASA Closed Claims Project database in an effort to identify recurrent patterns of eye injury associated with anesthesia care and potential strategies for prevention.

Methods: Anesthesiologist-reviewers reviewed the closed claim files of 23 US professional liability insurance carriers as previously described.¹ We examined the 71 claims for eye injury within the database of 2046 claims, with special attention to those injuries resulting from patient movement during general anesthesia.

Results: Eye injuries occurred in 3% of the total database, with most of these cases (61%) resulting in blindness. One third of these injuries occurred during ophthalmic surgery. General anesthesia was the anesthetic technique in 59 (83%) of all eye injury claims. Patient movement during anesthesia was identified as the mechanism of injury in 21 (30%) of the cases. Sixteen of the "movement" claims occurred during general anesthesia and 5 during MAC. All the movement claims resulted in permanent injury (blindness). Payments were made to the plaintiff in 88% of the claims for movement under general anesthesia, with a median payment of \$108,000 (Table). By contrast, median payment in the non-movement claims was only \$9,000. Muscle relaxants were utilized in fewer than half the claims for movement under general anesthesia, and peripheral nerve stimulators were not used in any. Care was deemed appropriate by the anesthesiologist-reviewers in only 3 (19%) of the movement cases under general anesthesia.

Conclusions: Patient movement during general anesthesia for ophthalmic surgery represents a significant source of eye injury claims characterized by high severity of injury, generally poor determinations regarding standard of care by peers, and high payments. This complication should be preventable through the judicious use of muscle relaxants and their monitoring.

PAYMENTS, STANDARD OF CARE, AND INCIDENCE OF PERMANENT INJURY: EYE INJURY CLAIMS

	# (%) Payments Median	# (%) Substandard Care	# (%) Permanent Injury
Movement Under General Anesthesia (n=16)	14 (88%) \$108K	13 (81%)	16 (100%)
Movement Under MAC (n=5)	2 (40%) \$35K	1 (20%)	5 (100%)
Other Eye Injury Claims (n=50)	34 (68%) \$9K	20 (40%)	22 (44%)

Cheney FW, et al. JAMA 1989;1599-1603.