Handout QT interval prolongation as a safety signal for phenol-croton oil peels
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- MARKEDLY PROLONGED QTc: >500ms or >60ms increase from baseline. Offending cause must be discontinued.
- PROLONGATION: >450ms or >30ms increase from baseline. Caution.
- Check pt meds pre/per-op for QTc prolongation. CREDIBLEMEDS.ORG
- 10 patients: median peak QTc prolongation: 38ms. 1 <20ms (male, full face on metoprolol); 3 20-30ms (all localized); 4 30-60ms (full face and/or neck); 2 >60ms (full face). No >500ms. 3 >480ms. No statistical difference from baseline to 15 minutes after the peel (P=.68) or in QTc evaluated by 12-lead ECG 30 minutes before and 30 minutes after the procedure (P=1.0).
- Returns to baseline in 15 min. Importance of pauses between cosmetic units.
- Check 12-lead ECG: QTc interval some weeks before. Make necessary changes. Ideally, pre-op QTc <420ms. Contraindicated if >480ms.
- Use of prophylactic beta-blockers on selected cases. Monitor pOx, athsma.
- COPD or Athsma: Relative contraindication to phenol peels.
- MD and Staff: Activated carbon masks: reusable or disposable (preferred). Extremely high >>> OSHA limits despite adequate ventilation / exhaustion.

Fig 1. Corrected QT interval (QTc) prolongation during phenol-croton oil peels. Boxplots of the difference from baseline during peak increase in QTc during the procedure and 15-minute-postpeel QTc.
Fig. 2. Corrected QT interval (QTc) prolongation during phenol-croton oil peels. Blank circles: QTc in the preoperative period. Black triangles: Peak QTc during chemical peel with 35% phenol. White circles: immediate postoperative period, after application of topical anesthesia with lidocaine 4% cream and petrolatum jelly. Sum of arrhythmic events for each interval of 10 minutes are noted vertically in the graph: Supraventricular extra-systoles (SVES), premature ventricular contractions (PVC), bigeminy (BG), and non-sustained supraventricular tachycardia (SVT). Ten consecutive patients were monitored by holter, from left to right: 1) 86kg, 60-year-old male taking 50mg of metoprolol per day, full-face peel with 1.6% croton oil, tramadol 100mg 1 hour before peel. 2) 50kg, 50-year-old female, lateral and anterior neck with .4% croton oil, no analgesia. 3) 65kg, 58-year-old female, full face peel with 1.2% croton oil, oxycodone 10mg 3 hours before peel. 4) 65kg, 45-year-old female, full face peel with 1.2% croton oil, oxycodone 10mg 3 hours before peel. 5) 60kg, 69-year-old female, perioral peel with 1.2% croton oil, acetaminophen/codeine (500/30mg) 1 hour before peel. 6) 63kg, 68-year-old female, periorcular and perioral peel with 1.2% croton oil, oxycodone 10mg 3 hours before peel. 7) 75kg, 52-year-old female, full-face peel with 1.2% croton oil, oxycodone 10mg 3 hours before peel, esmolol was used intravenously for hypertension and tachycardia (push corresponded to lowering of QTc). 8) 55kg, 59-year-old female, full-face peel with 1.6% croton oil, oxycodone 10mg 3 hours before peel. 9) 57kg, 60-year-old female, periocular peel with 1.6% croton oil, acetaminophen/codeine (500/30mg) 1 hour before peel. 10) 62kg, 65-year-old female, full-face peel with 1.6% croton oil, oxycodone 10mg 3 hours before peel.