Report of Anesthesia in a

MH BIOPSY NEGATIVE PATIENT

(“MHN Report”)

INSTRUCTIONS
This form is to be filled out by an anesthesiologist or other health care provider.

1. Complete this form each time you anesthetize a patient who has had a negative MH biopsy (caffeine halothane contracture test).

2. The attending anesthesiologist should review the completed form.

3. If the patient has been registered previously in the NAMH Registry, please ask the patient for his Registry identification number and record it in the space provided.

4. A copy of this report may be given to the patient. Please send the original completed form to the NAMH Registry.

5. Return original completed form to:

The North American Malignant Hyperthermia Registry
University of Florida
Department of Anesthesiology
1600 SW Archer Road, PO Box 100254
Gainesville, FL 32610
1-888-274-7899
PATIENT IDENTIFICATION

1. Any previous North American MH Registry numbers associated with the patient. That is, the Registry number of this patient on a Biopsy Report, AMRA, or RSR (formerly AKA) or the Registry number’s of a close relative’s reports, etc.
   a. __ __ __ __ __ __ Comment ___________________________________________________________________
   b. __ __ __ __ __ __ Comment ___________________________________________________________________
   c. __ __ __ __ __ __ Comment ___________________________________________________________________

2. Patient's Initials

   ____________ ____________ ____________
   first    middle    last

3. Has consent been obtained to enter patient's name into the Registry?
   check one
   (   ) yes
   (   ) no

   If yes, please complete a-g on following page.

Note: DO NOT COMPLETE IF CONSENT HAS NOT BEEN OBTAINED

a. Patient’s name

   ____________________________ ____________________________ ____________________________
   last          first        middle

b. Patient's previous name

   ____________________________ ____________________________ ____________________________
   last          first        middle

c. Patient's maiden name

   ____________________________
   last
d. Patient’s Address

________________________________________________________________________
street address

________________________________________________________________________
city state/province zip/postal code

________________________________________________________________________
country

e. Phone number
   (Home) (_____) _____ - _______
   (Work) (_____) _____ - _______

f. Patient e-mail address

________________________________________________________________________

g. Date of patient's birth

____ ___ ___ \ ___ ___ \ ___
year month day

DEMOGRAPHIC INFORMATION

4. Sex
   check one
   ( ) male ( ) female

5. Weight
   ___ ___ . ___ kilograms OR ___ lbs

6. Height
   ___ ___ . ___ cms OR ___ ft ___ inches

7. Year of patient’s birth
   ___ ___ ___
8. Race:
   *check as many as apply*
   *(data utilized for demographic purposes only)*
   ( ) Caucasian        ( ) African
   ( ) Hispanic         ( ) East Asian
   ( ) African-American ( ) South Asian
   ( ) Native American  ( ) Middle Eastern
   ( ) Hawaiian or Pacific Islander
   ( ) other *(specify)*: __________________________________________

9. Body Build
   *check one*
   ( ) Normal          ( ) Lean
   ( ) Muscular        ( ) Obese
   ( ) Postpartum
   ( ) Other *(specify)*: __________________________________________

10. State or province of the patient’s residence
    ___ __

11. State or province of the facility in which anesthesia was given.
    ___ __

12. Reporting physician’s name *(optional)*
    ____________________________

13. Facility type:
    ( ) Hospital
    ( ) Ambulatory Surgical facility on hospital campus
    ( ) Free-standing ambulatory surgical facility
    ( ) Dental Office
    ( ) Surgical Office

13. Facility name *(optional)*
    ____________________________

14. Anesthesia Department telephone number and/or email address *(optional)*
    (___ ___) - ___ ___ - ___ ___ ___
    ________________@________________
ANESTHETIC HISTORY

15. Patient’s anesthetic history is positive for:
   check all applicable
   (   ) clear-cut clinical MH episode(s)
   (   ) possible MH (not clear-cut MH)
   (   ) masseter muscle rigidity only
   (   ) positive calcium uptake test (performed in Boston)
   (   ) other (specify) _____________________________________________
   (   ) none of the above

16. How many times was this patient anesthetized prior to this evaluation?
   __ __ (   ) unknown but > 0 (   ) unknown

17. How many were general anesthetics?
   __ __ (   ) unknown but > 0 (   ) unknown

18. Indicate the number of anesthetics with the following agents:
   __ __ volatile agents without succinylcholine
   __ __ volatile agents with succinylcholine
   __ __ succinylcholine without other known triggering agents

19. Year of negative MH muscle biopsy (caffeine halothane contracture test) __ __ __ __

20. Center which performed MH Biopsy
    check one
    (   ) Children’s Hospital of Oklahoma
    (   ) Cleveland Clinic
    (   ) Hahnemann University
    (   ) Thomas Jefferson University
    (   ) Loyola University
    (   ) Northwestern University
    (   ) Mayo Clinic
    (   ) Ottawa Hospital Civic Campus
    (   ) Presbyterian University Hospital (Pittsburgh)
    (   ) Toronto General Hospital
    (   ) UC-Davis
    (   ) UCLA
    (   ) Uniformed Services University
    (   ) University of Calgary
    (   ) University of Florida
    (   ) University of Iowa
ANESTHETIC MANAGEMENT

21. Year of anesthetic

22. Type of procedure scheduled  check all applicable
   ( ) cardiothoracic
   ( ) dental
   ( ) ear, nose, or throat
   ( ) eye
   ( ) general surgery
   ( ) laparoscopic surgery
      ( ) abdominal
      ( ) pelvic
   ( ) other (specify): _______________________________
   ( ) gynecology
   ( ) neurosurgery
   ( ) thoracoscopic surgery (thoracic)
   ( ) obstetrics
   ( ) oral surgery
   ( ) orthopedic
   ( ) plastic surgery
   ( ) radiology
   ( ) urology
   ( ) vascular
   ( ) transplant
   ( ) other (specify): _______________________________

23. Was the procedure an emergency?  check one
   ( ) no
   ( ) yes
MONITORING UTILIZED

24. Monitoring utilized:

\textit{check all monitoring used}

( ) blood pressure monitor \hspace{1em} ( ) end-tidal PCO$_2$

( ) electrocardiograph \hspace{1em} ( ) pulse oximeter

( ) stethoscope \hspace{1em} ( ) bladder (Foley) catheter

( ) arterial catheter

( ) central venous catheter

( ) pulmonary artery catheter

\textit{temperature probes:}

( ) axillary

( ) bladder

( ) esophageal

( ) nasopharyngeal

( ) rectal

( ) skin-electronic

( ) skin-liquid crystal

( ) tympanic

( ) other (\textit{specify}): _______________________________________

25. Type of anesthetic

\textit{check all applicable}

( ) monitored anesthesia care (local with anesthesia stand-by)

( ) regional anesthesia

( ) spinal anesthesia

( ) epidural anesthesia

( ) general anesthesia with a face mask only

( ) general anesthesia \textbf{with} a laryngeal mask airway

( ) general anesthesia \textbf{with} endotracheal intubation

( ) general anesthesia \textbf{with} volatile agents (potent inhalation anesthetics)

26. Type of ventilation \textit{check one}

( ) spontaneous

( ) assisted

( ) controlled
27. Pre-medication and anesthetic agents utilized:

*check all applicable*

( ) sodium citrated citric acid (Bicitra)

( ) cimetidine (Tagamet)  ( ) sevoflurane (Ultane)
( ) famotidine (Pepcid)  ( ) desflurane (Suprane)
( ) lansoprazole (Prevacid)  ( ) isoflurane (Forane)
( ) ranitidine (Zantac)  ( ) nitrous oxide
( ) metoclopramide (Reglan)  ( ) nasalbuphine (Nubain)
( ) omeprazole (Prilosec)  ( ) naloxone (Narcan)

( ) atropine  ( ) glycopyrrolate (Robinul)
( ) scopolamine (Hyoscine)  ( ) atracurium (Tracrium)
( ) dolasetron (Anzemet)  ( ) cis-atracurium (Nimbex)
( ) droperidol (Inapsine)  ( ) rocuronium
( ) hydroxyzine (Vistaril)  ( ) vecuronium (Norcuron)
( ) ondansetron (Zofran)  ( ) diphenhydramine (Benedryl)
( ) promethazine (Phenergan)  ( ) pancuronium (Pavulon)
( ) diphenhydramine (Benedryl)  ( ) other NMB

( ) clonidine  ( ) IM succinylcholine (Anectine)
( ) dexmedetomidine  ( ) IV succinylcholine (Anectine)
( ) ketorolac (Toradol)  ( ) NO succinylcholine
( ) acetaminophen (Tylenol)

( ) diazepam (Valium)  ( ) edrophonium (Tensilon)
( ) lorazepam (Ativan)  ( ) neostigmine (Prostigmin)
( ) midazolam (Versed)  ( ) physostigmine (Antilirium)

( ) etomidate (Amidate)  ( ) bupivacaine (Marcaine)
( ) ketamine (Ketalar)  ( ) levo-bupivacaine
( ) propofol (Diprivan)  ( ) choroprocaine (Nesacaine)

( ) alfentanil (Alfenta)  ( ) cocaine
( ) fentanyl (Sublimaze)  ( ) etidocaine (Duranest)
( ) fentanyl (Sublimaze)  ( ) lidocaine (Xylocaine)
( ) fentanyl (Sublimaze)  ( ) mepivacaine (Carbocaine)
( ) meperidine (Demerol)  ( ) morphine
( ) remifentanil (Ultiva)  ( ) prilocaine (Citanest)
( ) ketorolac (Toradol)  ( ) procaaine (Novocain)
( ) sufentanil (Sufenta)  ( ) ropivacaine (Naropin)
( ) hydromorphone (Dilaudid)  ( ) tetracaine (Pontocaine)
( ) unknown  ( ) epinephrine
( ) ephedrine  ( ) neosynephrine

( ) NO potent volatile anesthetic
( ) other (specify): ________________________________

28. Total duration of potent inhalation anesthetic administration: __ __.__ __ (hours and minutes since induction)

29. Was a barbiturate given prior to the potent inhalation anesthetic?
check one
( ) no
( ) yes
( ) n/a

30. Was a non-depolarizing neuromuscular blocker given during the potent inhalation anesthetic?
check one
( ) no
( ) yes
( ) n/a

31. Maximum observed perioperative temperature and end-tidal pCO₂:
fill in the blanks
__ __ . __ maximum temperature noted (°C)
__ __ __ maximum end-tidal pCO₂ noted (mmHg)

32. Were any signs of MH noted during this anesthetic?
check one
( ) no
( ) yes

33. Abnormal signs felt to be inappropriate in the judgment of the attending anesthesiologist
NUMBER in order of appearance
(a number may be used more than once if signs noted simultaneously)
___ masseter spasm: mouth cannot be fully opened, but direct laryngoscopy possible
___ masseter spasm: jaw clamped shut, intubation via direct visualization impossible
___ generalized muscular rigidity
___ cola colored urine
___ tachypnea
___ hypercarbia
___ cyanosis
___ skin mottling
___ sinus tachycardia
___ ventricular tachycardia
___ ventricular fibrillation
___ elevated temperature
___ rapidly increasing temperature
___ sweating
___ excessive bleeding
___ hypertension > 20% of baseline
___ other (specify): ____________________________________________

34. Laboratory Evaluation
    fill in the blank, write unknown if results not known

most abnormal arterial blood gas after MH was suspected
___ ___ FiO2
___ ___ pH
___ ___ PCO2 (mmHg)
___ ___ PO2 (mmHg)
___ ___ BE (mEq/L) (specify ±)
___ ___ Bicarbonate (mEq/L)
___ ___ Time (after induction)

(hours and minutes since induction)

peak lactic acid
___ ___ mmol/L

peak K+
___ ___ mEq/L or mmol/L

peak post-op creatine kinase*
___ ___ , ___ ___ U/L

* recommended intervals for creatine kinase determination are 0, 6, 12, 24 hours after MH
__ __ hours after induction reaction suspected

peak serum myoglobin*
__ __, __ __ __ ng/ml
__ __ hours after induction

peak urine myoglobin
__ __, __ __ __ mg/L
__ __ hours after induction

PT (prothrombin time) INR PTT (partial thromboplastin time)
__ __ seconds __.__ __ __ seconds

laboratory upper limit of normal laboratory upper limit of normal
__ __ __ seconds __ __ __ __ seconds

platelet count fibrinogen
__ __ __, __ __ __ __ __ __ mg/dl

35. Treatment given for signs of MH
check all treatments utilized; fill in the blanks

( ) Hyperventilation with 100% oxygen
( ) Intraoperative or postoperative dantrolene given
__ __ __ Time required (after anesthetic induction) (hours and minutes since induction)
__ __ __ __ Total dose given after induction (mg)

( ) Active cooling
   Method (specify) ______________________________

( ) Fluid loading
   __ __ ml/kg
   Fluid type (specify) ______________________________

( ) Furosemide
( ) Mannitol
( ) Bicarbonate
( ) Glucose, insulin
( ) Bretylium
( ) Lidocaine
( ) Procainamide
( ) Defibrillation
( ) CPR
36. Did the patient survive? 
   check one  
   ( ) no  
   ( ) yes  

37. Cause of death?  
   ( ) MH  
   ( ) Other (specify): ______________________________________

COMMENTS ON PATIENT
Optional
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Updated 11-14-17