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**Brodifacoum Poisoning
with Synthetic Marijuana**

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Disclosure

- None of the authors have any commercial or financial interest in the following presentation.

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- Many of the images included in this presentation are graphic in nature.

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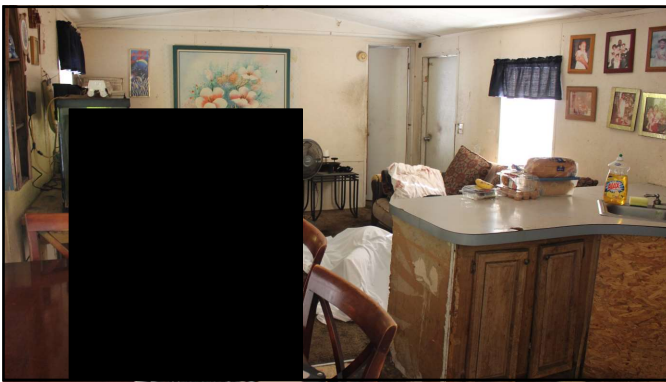
History

- A 45-year-old male with a past medical history of Schizophrenia and Marijuana use living with his father complains of hemoptysis in the evening.
- The decedent denies fathers request for him to go to the hospital and falls asleep on the couch.
- The father wakes up in the morning to find son covered in blood on the couch and unresponsive.
- EMS arrives and he is pronounced DOS.

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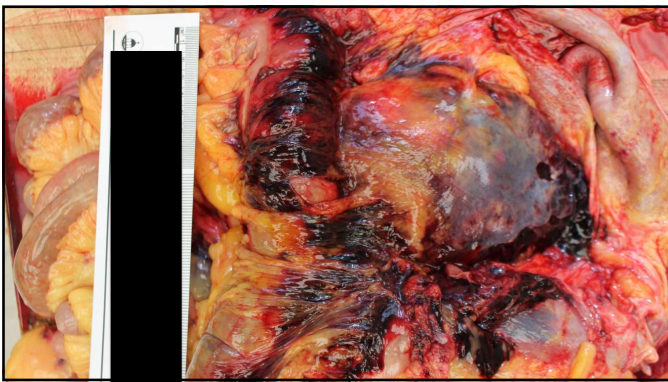
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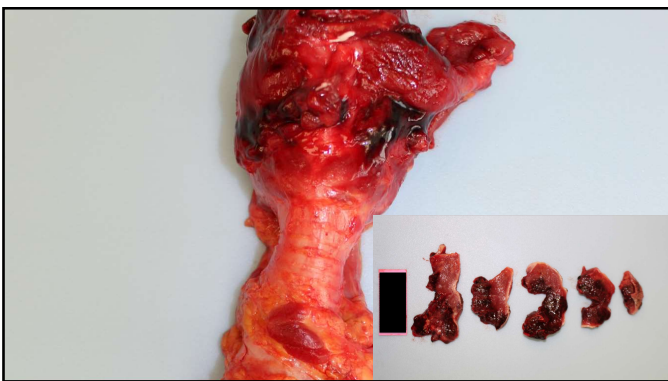
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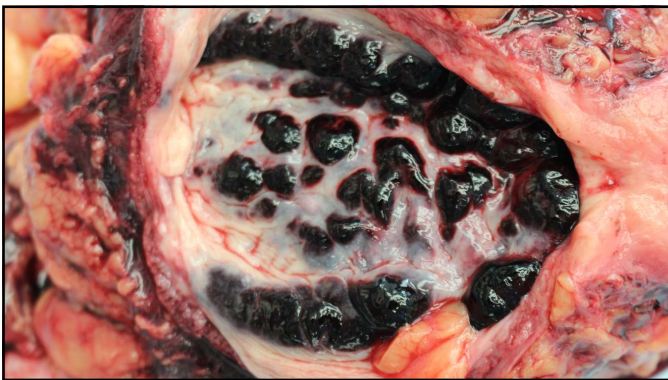
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Differential Diagnoses

- Bleeding Diathesis
 - Acquired
 - Warfarin, Vitamin K Deficiency, Liver Failure, Disseminated Intravascular Coagulation
 - Inherited
 - Hemophilia, von Willebrand disease, Bernard-Soulier syndrome, Wiskott-Aldrich syndrome, and Glanzmann's thrombasthenia

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- **Final Diagnosis:**
 - Brodifacoum poisoning
 - Hemorrhagic diathesis
 - Schizophrenia
 - 5F-ADB(synthetic cannabinoid) detected
 - THC metabolite detected
- **Cause of Death:**
 - Hemorrhagic Diathesis due to Brodifacoum Poisoning
- **Manner of Death:**
 - Undetermined

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Brodifacoum

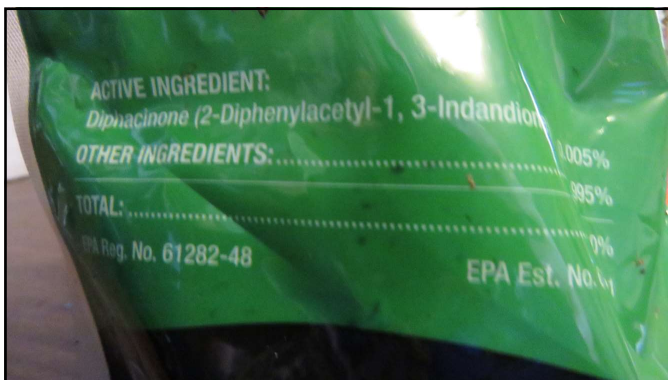
- Created in 1975 to combat warfarin resistant rats
- Inhibits Vitamin K epoxide reductase
 - Blocks regeneration of Vitamin K1
 - Results in life-threatening anticoagulation
 - 100 times more potent than warfarin
- Half-life of 24 days

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Types of Rodenticides

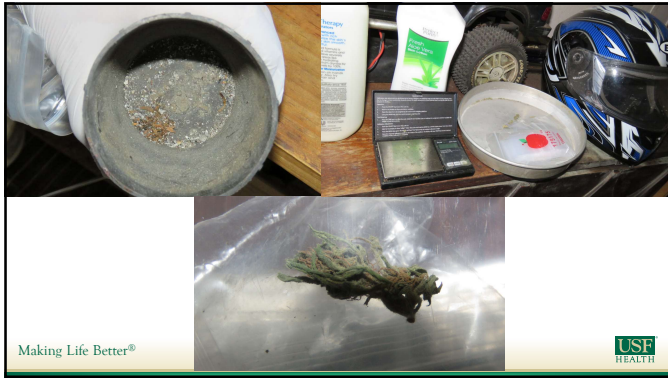
Table 2. Summary of common rodenticides

Rodenticide	Type	Chemical Class	Days of feeding needed
Warfarin	Anticoagulant	Hydroxycoumarin	multiple
Chlorophacinone	Anticoagulant	Indandione	multiple
Diphacinone	Anticoagulant	Indandione	multiple
Bromadiolone	Anticoagulant	Hydroxycoumarin	single
Difethialone	Anticoagulant	Hydroxycoumarin	single
Brodifacoum	Anticoagulant	Hydroxycoumarin	single
Bromethalin	Non-anticoagulant	other	single
Cholecalciferol	Non-anticoagulant	Vitamin D3	multiple
Zinc phosphide	Non-anticoagulant	other	single
Strychnine	Non-anticoagulant	other	single

Making Life Better® Source: <http://npic.orst.edu/factsheets/rodenticides.html#references>



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References

- 1) *Reregistration Eligibility Decision (RED) Rodenticide cluster*, EPA 738-R-98-007; U.S. Environmental Protection Agency, Office of Prevention, Pesticides, and Toxic Substances, Office of Pesticide Programs, U.S. Government Printing Office: Washington, DC, 1998
- 2) <https://toxnet.nlm.nih.gov/cgi-bin/sis/search/a?dbs+hsdb:@term+@DOCNO+3916>
- 3) McPherson, R. A., & Pincus, M. R. (2017). *Henry's clinical diagnosis and management by laboratory methods*. St. Louis, MO: Elsevier.

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Image Resources

- <https://www.psychemedics.com/blog/2017/08/psychemedics-corporation-launches-synthetic-cannabinoids-hair-test/>
- <https://www.ebay.com.au/itm/TALON-PELLETS-1kg-Rat-Mouse-Mice-Bait-Poison-Killer-Rodenticide-Brodifacoum-/161810798756>
- <http://npic.orst.edu/factsheets/rodenticides.html#references>

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