Mouse model for brain metastasis

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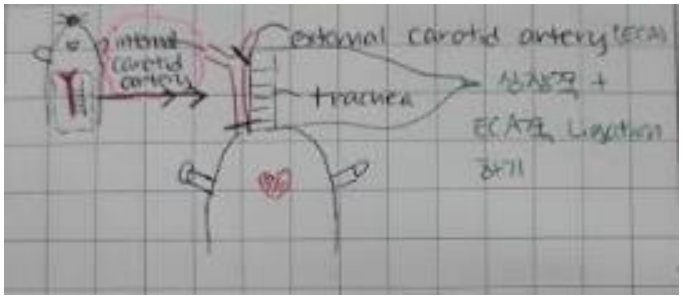
Materials

1. Xylazine-ketamine for anesthesia
2. Surgical instruments
3. Diameter: 0.38mm polyethylene tubing for catheter
4. 25μL Hamilton syringe
5. 4-0 black silk
6. 4-0 nylon
7. Absorbent swabs
8. Blood vessel clamp
9. 10mL syringe
10. Insulin syringe
11. Alcohol
12. PBS
13. 1 x 10^5 LLC-LUC cells/10μL
14. Syringe pump

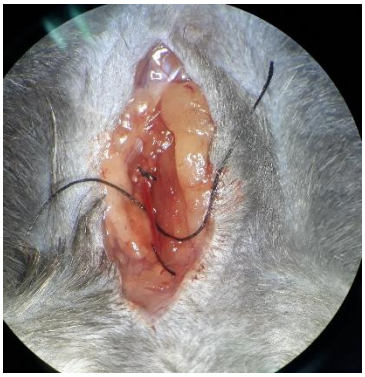
Methods

1. Connect the catheter to 25μL Hamilton syringe
2. Put PBS in a 10mL syringe

3. Wash 25μL Hamilton syringe with PBS
4. Draw 2.5μL of air bubble with 25μL Hamilton syringe
5. Draw 12.5μL of PBS with the same 25μL Hamilton syringe
6. Anesthetized a mouse with xylazine-ketamine
7. Expose common carotid artery

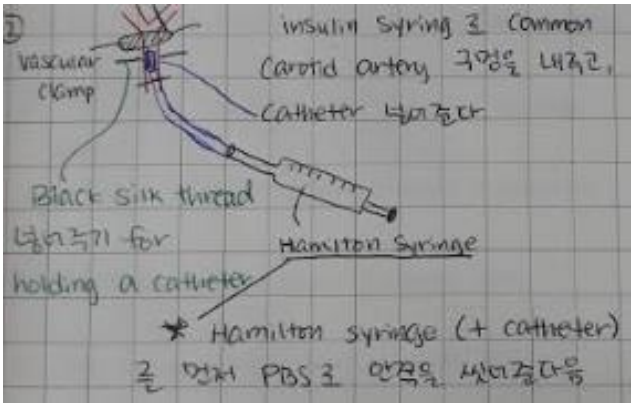


8. Ligate very lower part of common carotid artery
9. Ligate the external carotid artery (the one that looks like directing trachea)



10. Clamp the internal carotid artery

11. Draw 10μL of 1 x 10^5 LLC-LUC cells with 25μL the same Hamilton syringe
12. Make a hole on the common carotid artery with insulin syringe
13. Insert the catheter into the lumen of the common carotid artery
14. Tie around the catheter-inserted common carotid artery with black silk
15. Remove the clamp



16. Inject the tumor cells 10µL/3min. using syringe pump
17. Chase the tumor cells with 12.5µL of PBS using syringe pump

18. Remove the catheter
19. Ligate the common carotid artery

20. Suture the opening site with 4-0 nylon
21. Wash the catheter-Hamilton syringe with alcohol

- The brain metastasis would occur at the cerebellum on day 7
- Mouse starts to die on day 10