including safe delivery of the sclerosant agent 2. Procedure, including technical aspects and applied sequences of real-time MRI guided treatment of lymphatic malformations: a. Lesion localization b. Needle placement visualization c. Sclerosant-Gadolinium mixture injection d. Assessment of treatment success 3. Potential procedural complications

Abstract No. 500

Transfemoral vs. transradial access: patient preference assessment using iPad technology

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Purpose: Transradial access (TRA) has been shown to be less costly, safer, and preferred by patients for coronary interventions as compared to transfemoral access (TFA). The purpose of this study was to determine differences in patient preference for access site during non-coronary arterial interventions using survey based iPad technology.

Materials: From 1/2014 to 9/2015, retrospective review of all patients undergoing arterial interventions at a high volume academic medical center was performed. These patients were given a post-procedure survey (Surveymonkey.com) via a bedside iPad in the IR PACU. Surveys were available in English, Spanish and Mandarin. Questions related to pain at access site, preference for access site, procedure type and demographics was recorded. TRA and TFA procedures were all performed from the left wrist and right groin, respectively.

Results: Survey respondents (n=126) (82% male) included the following procedures: TACE (n=22, 23%), Y90 delivery (n=34, 35%), and planning (n=28, 29%), UFE (n=8, 8%) and renal intervention (n=6, 6%). Access sites included: TFA (n=31, 25%) and TRA (n=95, 75%). 67 patients reported having had both TRA and TFA in the past. Of those patients, 53/67 (79%) preferred TRA, 4/67 (6%) preferred TFA and 10/67 (15%) had no preference.

Conclusions: Post-procedure survey data acquired via iPad is feasible in a PACU setting. A strong patient preference for TRA over TFA was noted in patients who had undergone both types of access.

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Educational Exhibit — Abstract No. 501

When sugar isn't sweet: a primer on the perioperative management of diabetes for the interventional radiologist

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Learning Objectives: 1. Review the common medical treatments for Diabetes available in the United States 2. Outline the appropriate perioperative medication management depending on the complexity of the interventional procedure to be performed 3. Provide guidelines for the intraoperative management of acute hyperglycemia and/or hypoglycemia

Background: It is believed that approximately 9.3% of the total population of the United States, or roughly 29.3 million people, suffers from Diabetes. Of these patients, a further 25% are estimated to undergo some type of surgical procedure during their lifetime. As practiced medical therapies vary widely; from diet and exercise to oral medications to insulin injections and subcutaneous infusion pumps, the continued effective treatment of the disease in the perioperative setting provides a logistical challenge. Mismanagement can cause acute hyperglycemia and/or hypoglycemia in the intraoperative setting leading to electrolyte disturbances, hyper/hypovolemia, delayed wound healing and increased risk of infection.

Clinical Findings/Procedure Details: This educational exhibit will present the following: 1. Diabetic pathophysiology and epidemiology 2. Medical treatments common in the United States categorized by drug classification: namely insulins, alpha-glucosidase inhibitors, biguanides, DPP-4 inhibitors, glucagon-like peptides, meglitinides, sulfonylureas and thiazolidinediones 3. Recommended pre-operative testing and perioperative medication management striated by low, intermediate and high risk interventional procedures as determined by a combination of the AHA Guidelines on cardiac risk stratification for non-cardiac surgery and the intended use of general anesthesia versus moderate/local sedation 4. Guidelines for the acute medical treatment of intraoperative hyper/hypoglycemia

Conclusions: Diabetes is prevalent in the population of the United States and is frequently encountered in patients undergoing interventional procedures. A clear understanding of the nature of the disease, common therapies, perioperative medication management and intraoperative treatment of acute hyper/hypoglycemia is therefore of the utmost importance to prevent unnecessary patient morbidity.

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Abstract No. 502

Posterior occlusions limit effectiveness of dodecafluoropentane emulsion (DDFPe) neuroprotection

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Purpose: Animal studies have repeatedly shown Dodecafluoropentane emulsion (DDFPe) neuroprotection in ischemic strokes in the anterior circulation; however, when a posterior vessel is also occluded, the intricate cerebral dynamics may be altered. Many studies have used standard anterior circulation occlusions (STD) as their stroke model, but approximately 20% of ischemic strokes involve the nonstandard posterior circulation (NSTD). Thus, further investigation of DDFPe's benefits and limitations on reducing percent stroke volume (%SV) in NSTD animals is justified. Aim: Analyze the effectiveness of DDFPe in reducing anterior and posterior %SV in NSTD animals.
Materials: New Zealand White rabbits (N=26) had angiographic embolizations with plastic spheres and were subdivided into a) control (N=9) receiving 60 minute saline placebo injections or b) treated (N=17) with 2% w/v DDFPe (NuvOx Pharma; Tucson, AZ), at 0.3mL/kg, at 30 or 60 minute intervals beginning 1 hour post embolization. Animals were further classified by occlusion location as STD control (N=4), STD treatment (N=6), NSTD control (N=5), and NSTD treatment (N=11). They were sacrificed at 7 hours. Infarct volumes were analyzed using ImageJ. This study investigates a NSTD subgroup (NSTD-S) (N=13), control (N=5) and treated (N=8), with infarcts in anterior (ANT) and posterior (POST) vessel distribution on gross pathology.
Results: In NSTD animals, total %SV did not significantly decrease in DDFPe vs. controls (7.9 vs. 7.2%SV, p= 0.82) In the NSTD-S, ANT % SV showed no difference in DDFPe vs. controls (10.4 vs. 5.3%SV, p=0.24) and POST showed no difference in DDFPe vs. controls (1.4 vs. 2.1%SV, p=0.29). STD animals showed reductions in %SV with DDFPe therapy: DDFPE 0.6 %SV and controls 5.6 %SV, p=0.018.
Conclusions: DDFPe's effectiveness was limited in NSTD and NSTD-S animals. Although DDFPe provided ANT neuroprotection in STD animals, neither ANT nor POST % SV were reduced in NSTD-S animals with DDFPe. Multi-vessel occlusions involving the posterior vessels may hinder collateral flow, reduce drug delivery, and compromise outcomes. Further research is indicated.

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Educational Exhibit — Abstract No. 503

Guide-wire: A revisit to the basic building blocks. What an interventionist need to know ?

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Learning Objectives: To understand about guide wire material, the components & design, and to explain how these aspects influence the physical properties of wire. To explain what properties to consider before selecting a wire.
Background: Guidewires are essential tools for majority of interventional procedures. In a particular procedure they can be used for different purposes such as initial entry wire, selecting a vessel, support or to cross occlusion etc. Selection of wire to serve that specific purpose is determined by its physical properties like diameter, taper, stiffness, shape, tractability, torquebility, radioopacity, lubricity, tip load, tactile feedback etc. Understanding of how design and material used for different components of guidewire like core, body, tip, coils, coating and cover, influences physical properties of a guidewire will help in selecting a proper wire for intended use.
Clinical Findings/Procedure Details: Core is most important component of wire and is made of stainless steel, nitinol, high tensile strength stainless steel or hybrid. Stainless steel wires are stiffer, provide good torque control and support, however are prone to kink. Nitinol wires are kink resistant & provide flexibility. Small core diameter provides flexibility and trackability. Larger diameter offers more support & torque control. The "core to tip" design increases the stiffness & improves tip control. A "shaping ribbon" design increases shapeability. Cores with long taper provide increase trackability & are less prone to prolapse. Cres with short taper provides better support & torque control. Coils at tip of wire provide smoother core transition & add opacity. Coils also determine shapebility & tactile feedback. Tip load is an important feature & increases penetration power. Body of wire can be made of coils, polymer or hybrid. Wires with full polymer covering improve deliverability but decrease tactile feedback. Coatings of guide wire affects lubricity, tracking, and tactile feedback.
Conclusions: Physical properties of a guide wire depend on its material, components and design. Understanding of these features helps interventionist in selecting ideal wire for intended use.

Abstract No. 504

The small Y-shaped self-expandable airway covered metallic stent in the palliative treatment of thoracostomach-right main bronchus fistula following esophagectomy

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Purpose: To study the feasiblity, effectiveness and safty of small Y-shaped self-expandable covered metallic stents placement for treatment of thoracostomach-right main bronchus fistula.
Materials: From April 2013 to April 2014, we prospectively collected data on patients treated with Y-shaped self-expandable covered metallic stent placement for thoracostomach-right main bronchus fistula. According the diameter and length of airway,