West Middlesex University Hospital

Date of Search: 04 Aug 2017
Sources Searched: Medline, Embase.

Pulmonary Hypertension in Pregnancy

See full search strategy

1. Congenital heart disease and pregnancy: A contemporary approach to counselling, pre-pregnancy investigations and the impact of pregnancy on heart function

Author(s): Cauldwell M.; Steer P.; Gatzoulis M.

Source: Obstetric Medicine; Jun 2017; vol. 10 (no. 2); p. 53-57

Publication Date: Jun 2017

Publication Type(s): Review

Abstract: Cardiac disease in pregnancy is a challenging clinical problem. The number of women pursuing pregnancy and the underlying complexity of their cardiac disease is increasing, such that heart disease is now the leading cause of maternal mortality in developed countries. Women with congenital heart disease make up the majority of these cases and although maternal mortality is infrequent, a good outcome is only achieved though meticulous multidisciplinary care, beginning with pre-pregnancy counselling. All women with congenital heart disease should be assessed and be referred for pre-conception counselling prior to pregnancy and should receive thorough clinical assessment prior to pregnancy. In some conditions, such as pulmonary hypertension or severe/progressive aortic dilatation, pregnancy is of very high risk and women should be made aware of such risks. In such circumstances, if women choose to proceed with pregnancy, it is paramount that they are cared for by multidisciplinary teams who have experience and expertise of managing such conditions to minimise risks and optimise outcome.Copyright © 2017, © The Author(s) 2017.

Database: EMBASE

2. Anesthesia for pregnant women with pulmonary hypertension

Author(s): Rex S.; Devroe S.

Source: Current Opinion in Anaesthesiology; 2016; vol. 29 (no. 3); p. 273-281

Publication Date: 2016

Publication Type(s): Review

Available in full text at Current Opinion in Anaesthesiology - from Ovid

Abstract: Purpose of review Purpose of review is to summarize and highlight recent advances in the management of pregnant patients with pulmonary hypertension. Recent findings Despite recent advances in the therapy of pulmonary hypertension, prognosis for pregnant patients with pulmonary hypertension remains poor with high maternal mortality. Pregnancy is still considered contraindicated in these patients. If pregnancy occurs, referral to a tertiary hospital and a multidisciplinary approach ensure the best possible outcome. All pregnant patients with pulmonary hypertension should be counseled for a termination of pregnancy. If the patient wants to continue the pregnancy despite strong recommendations for therapeutic interruption, specific pulmonary hypertension therapy has to be initiated, adjusted, and/or augmented. A close clinical follow-up of the mother throughout the entire pregnancy is of utmost importance. Elective caesarean section in week 34-36 is recommended as preferred mode of delivery, preferentially under epidural or low-dose combined spinal-epidural anesthesia. Because of an acute increase in pulmonary vascular resistance and delivery-associated acute volume overload, the immediate postpartum period carries the highest risk for acute right ventricular failure necessitating close monitoring and treatment on an ICU. Summary Anesthesiologists involved in the management of pregnant patients with pulmonary hypertension must have detailed knowledge of pathophysiological alterations in pregnancy and during birth, cardiac (patho)physiology, cardiovascular and obstetric pharmacology, hemodynamic monitoring, and echocardiography. Both regional and general anesthesia have typical adverse effects that can severely jeopardize the cardiovascular system in patients with pulmonary hypertension, and should therefore be anticipated/prevented/rapidly treated by the attending anesthesiologist.

Database: EMBASE

3. Pregnancy in pulmonary arterial hypertension.

Author(s): Olsson, Karen M; Channick, Richard

Source: European respiratory review : an official journal of the European Respiratory Society; Dec 2016; vol. 25 (no. 142); p. 431-437

Publication Date: Dec 2016

Publication Type(s): Journal Article Review

PubMedID: 27903665

Available in full text at European Respiratory Review - from Highwire Press

Available in full text at European Respiratory Review - from Free Access Content

Abstract: Despite advanced therapies, maternal mortality in women with pulmonary arterial hypertension (PAH) remains high in pregnancy and is especially high during the post-partum period. However, recent data indicates that morbidity and mortality during pregnancy and after birth have improved for PAH patients. The current European Society of Cardiology/European Respiratory Society guidelines recommend that women with PAH should not become pregnant. Therefore, the risks associated with pregnancy must be emphasised and counselling offered to women at the time of PAH diagnosis and to women with PAH who become pregnant. Early termination should be

discussed. Women who choose to continue with their pregnancy should be treated at specialised pulmonary hypertension centres with experience in managing PAH during and after pregnancy.

Database: Medline

4. Special Situations in Pulmonary Hypertension: Pregnancy and Right Ventricular Failure.

Author(s): Svetlichnaya, Jana; Janmohammed, Munir; De Marco, Teresa

Source: Cardiology clinics; Aug 2016; vol. 34 (no. 3); p. 473-487

Publication Date: Aug 2016

Publication Type(s): Journal Article Review

PubMedID: 27443142

Abstract: Despite rapid advances in medical therapy, pregnancy and right ventricular (RV) failure predicts a poor prognosis in patients with pulmonary arterial hypertension. Evidence-based therapy for pulmonary arterial hypertension should be initiated early in the disease course to decrease RV wall stress and prevent RV remodeling and fibrosis. In patients with acutely decompensated RV failure, an aggressive and multifaceted approach must be used; a thorough search for triggering factors for the decompensation is a key part of the successful management strategy. Patients with refractory RV failure who are not candidates for surgical intervention should be referred to palliative care to maximize quality of life and symptom relief.

Database: Medline

5. High-Risk Cardiac Disease in Pregnancy: Part II

Author(s): Elkayam U.; Goland S.; Pieper P.G.; Silverside C.K.

Source: Journal of the American College of Cardiology; Aug 2016; vol. 68 (no. 5); p. 502-516

Publication Date: Aug 2016

Publication Type(s): Review

Available in full text at Journal of the American College of Cardiology - from ProQuest

Available in full text at Journal of the American College of Cardiology - from Free Access Content

Abstract: Heart disease continues to be the leading cause of nonobstetric maternal morbidity and mortality. Early diagnosis and appropriate care can lead to prevention of complications and improvement of pregnancy outcome. This paper continues the review and provides recommendations for the approach to high-risk cardiovascular conditions during gestation.

Database: EMBASE

6. Successful pregnancy and delivery in patients with uncorrected single ventricle: Three new cases and literature review

Author(s): Wang K.; Yu H.; Luo H.; Xin Y.

Source: International Journal of Cardiology; 2015; vol. 184 (no. 1); p. 135-139

Publication Date: 2015

Publication Type(s): Review

Abstract: Due to high risks of both maternal and fetal complications, pregnancy is not encouraged for women with uncorrected univentricular heart (UVH). Here, we report three cases of successful pregnancy and delivery in patients with uncorrected UVH. A literature review has been performed. It appears that maternal and neonatal risks are mainly associated with higher NYHA heart failure class, pulmonary hypertension, and history of congestive heart failure. In the absence of these risk factors, successful pregnancy still can be achieved with mild complications. Care by a multidisciplinary team during delivery is necessary to for a good prognosis.

Database: EMBASE

7. Pregnancy and pulmonary arterial hypertension: A clinical conundrum.

Author(s): Sahni, Sonu; Palkar, Atul V; Rochelson, Burton L; Kępa, Wiktor; Talwar, Arunabh

Source: Pregnancy hypertension; Apr 2015; vol. 5 (no. 2); p. 157-164

Publication Date: Apr 2015

Publication Type(s): Case Reports Journal Article Review

PubMedID: 25943638

Abstract: Pulmonary arterial hypertension (PAH) is a rare and devastating disease characterized by progressive increases in pulmonary arterial pressure and pulmonary vascular resistance which eventually leads to right ventricular failure and death. PAH inflicts most commonly women, majority of who are of childbearing age. Pregnancy in the setting of PAH is absolutely contraindicated due to high maternal fetal morbidity and guidelines do not exist for the management of such cases. A MEDLINE/PubMed search was performed identifying all relevant articles with "pulmonary arterial hypertension" and "pregnancy" in the title. Six case series were reviewed as well as our own center's experience outlined. Though there exists generalized treatment measures that are followed in such cases, management varies among different national centers as well an on an international level. At our center patients are managed using a multidisciplinary approach at a high risk obstetric center with preference for intravenous prostacyclin therapy. Women of child bearing age with possible signs and symptoms of PAH must be promptly diagnosed and managed expectantly with an emphasis on maternal-fetal safety.

Database: Medline

8. Pulmonary hypertension and pregnancy: an overview.

Author(s): Gei, Alfredo; Montúfar-Rueda, Carlos

Source: Clinical obstetrics and gynecology; Dec 2014; vol. 57 (no. 4); p. 806-826

Publication Date: Dec 2014

Publication Type(s): Journal Article Review

PubMedID: 25314091

Available in full text at Clinical Obstetrics and Gynecology - from Ovid

Abstract: Pulmonary hypertension is a syndrome infrequently associated with pregnancy. Despite advancements in therapy during the past 25 years and encouraging reports of improved outcomes, pulmonary arterial hypertension remains a devastating disease with a significantly reduced lifespan. This disorder should still be considered a contraindication to pregnancy. The decision of a patient to continue the pregnancy should be supported by an empathetic group of health care professionals who would optimize their treatment and hopefully their pregnancy outcomes and survival after delivery. We overview here different aspects of the diagnosis, evaluation, management, and counseling of patients suffering from pulmonary hypertension during pregnancy.

Database: Medline

9. Pulmonary arterial hypertension in pregnancy.

Author(s): Običan, Sarah G; Cleary, Kirsten L

Source: Seminars in perinatology; Aug 2014; vol. 38 (no. 5); p. 289-294

Publication Date: Aug 2014

Publication Type(s): Journal Article Review

PubMedID: 25037519

Abstract: Pulmonary hypertension is a medical condition characterized by elevated pulmonary arterial pressure and secondary right heart failure. Pulmonary arterial hypertension is a subset of pulmonary hypertension, which is characterized by an underlying disorder of the pulmonary arterial vasculature. Pulmonary hypertension can also occur secondarily to structural cardiac disease, autoimmune disorders, and toxic exposures. Although pregnancies affected by pulmonary hypertension and pulmonary arterial hypertension are rare, the pathophysiology exacerbated by pregnancy confers both high maternal and fetal mortality and morbidity. In light of new treatment modalities and the use of a multidisciplinary approach to care, maternal outcomes may be improving.

Database: Medline

10. 2014 ESC Guidelines on the diagnosis and management of acute pulmonary embolism

Author(s): Konstantinides S.V.; Lankeit M.; Maack C.; Mayer E.; Achenbach S.; Baumgartner H.; Kirchhof P.; Bauersachs R.; Danchin N.; Lekakis J.; Davos C.H.; Torbicki A.; Pruszczyk P.; Ponikowski P.; Tendera M.; Agnelli G.; Galie N.; Zompatori M.; Ferrari R.; Piepoli M.F.; Ageno W.; Asteggiano R.; Becattini C.; Buller H.R.; Humbert M.; Meneveau N.; Dean V.; Sanchez O.; Fitzmaurice D.; Deaton C.; Nihoyannopoulos P.; Gibbs J.S.R.; Huisman M.V.; Noordegraaf A.V.; Bax J.J.; Hoes A.; Geersing G.-J.; Hendriks J.; Kucher N.; Perrier A.; Windecker S.; Bounameaux H.; Lang I.; Rasmussen L.H.; Schindler T.H.; Spyropoulos A.C.; Svitil P.; Linhart A.; Zamorano J.L.; Bueno H.; Tamargo J.L.; Jimenez D.; Sanchez M.A.G.; Monreal M.; Erol C.; Fagard R.; Kolh P.; Lancellotti P.; Wijns W.; Kilickap M.; Hasdai D.; Knuuti J.; Sirnes P.A.; Agewall S.; Mareev V.; Morais J.; Popescu B.A.

Source: European Heart Journal; Jul 2014; vol. 35 (no. 43); p. 3033-3080

Publication Date: Jul 2014

Publication Type(s): Review

PubMedID: 25173341

Available in full text at European Heart Journal - from Highwire Press

Database: EMBASE

11. Pregnancy and pulmonary hypertension.

Author(s): Pieper, Petronella G; Lameijer, Heleen; Hoendermis, Elke S

Source: Best practice & research. Clinical obstetrics & gynaecology; May 2014; vol. 28 (no. 4); p. 579-591

Publication Date: May 2014

Publication Type(s): Journal Article Review

PubMedID: 24685319

Abstract: Pulmonary hypertension during pregnancy is associated with considerable risks of maternal mortality and morbidity. Our systematic review of the literature on the use of targeted treatments for pulmonary arterial hypertension during pregnancy indicates a considerable decrease of mortality since a previous review in 1998 (16% v 38%), and a further non-significant decrease in mortality since the latest review in 2009 (16% v 25%). In addition to the use of targeted treatments, the timely institution of these treatments, and early planned delivery, may contribute to better outcome. Furthermore, research suggests that women with mild pulmonary hypertension or favourable functional class may have a better prognosis, but there is yet no proof of decreased mortality among these women. Despite an improved prognosis, pregnancy is contra-indicated in women with pulmonary hypertension and, when pregnancy occurs, termination should be considered. When pregnancy continues, management by a multidisciplinary team in a specialist centre is indicated.

Database: Medline

12. Pulmonary hypertension in pregnancy.

Author(s): Martínez, Mariella Vélez; Rutherford, John D

Source: Cardiology in review; 2013; vol. 21 (no. 4); p. 167-173

Publication Date: 2013

Publication Type(s): Journal Article Review

PubMedID: 23018670

Available in full text at Cardiology in Review - from Ovid

Abstract: The presence of pulmonary arterial hypertension (PAH) in pregnancy is rare and signifies a high-risk pregnancy. Although the majority of mothers have knowledge of their condition before pregnancy, approximately one-third of patients are diagnosed during pregnancy. Termination of pregnancy should be discussed, and is often advised; however, a significant proportion of patients will choose to proceed with the pregnancy despite increased maternal and fetal mortality. Currently, most pregnant patients receive advanced therapy for treatment of PAH, particularly prostacyclin analogues. Particular attention is paid to volume status and blood loss and there has been a major trend toward delivery by cesarean section under controlled conditions involving an expert multidisciplinary team. The time of greatest maternal risk is in the first month after delivery. Transplantation of these patients in the nonpregnant state may be considered when those with idiopathic pulmonary hypertension have poor functional status despite optimal therapy and their projected 2-year survival is less than 50%. For patients with Eisenmenger syndrome, severe symptoms and an unacceptable quality of life may lead to transplantation.

Database: Medline

13. Pregnancy and pulmonary hypertension: a practical approach to management.

Author(s): Kiely, David G; Condliffe, Robin; Wilson, Vicki J; Gandhi, Suarabh V; Elliot, Charlie A

Source: Obstetric medicine; Dec 2013; vol. 6 (no. 4); p. 144-154

Publication Date: Dec 2013

Publication Type(s): Journal Article Review

PubMedID: 27656247

Available in full text at Obstetric Medicine - from National Library of Medicine

Abstract: Pulmonary hypertension remains a major cause of cardiac maternal death in the developed world. Over the last two decades, effective therapies for pulmonary hypertension have been developed, improving symptoms and survival. Consequently, increasing numbers of women with pulmonary hypertension and childbearing potential exist, with a number considering pregnancy. Patients with pulmonary hypertension may also present for the first time during pregnancy or shortly following delivery. The last decade has seen increasing reports of women with pulmonary hypertension surviving pregnancy using a variety of approaches but there is still a significant maternal mortality at between 12% and 33%. Current recommendations counsel that patients with known pulmonary hypertension should be strongly advised to avoid pregnancy with the provision of clear contraceptive advice and termination of pregnancy should be considered in its eventuality. In patients who are fully informed and who have been counselled regarding the risks of continuing with pregnancy, there is growing evidence that a multi-professional approach with expert care in pulmonary hypertension centres may improve outlook, although the mortality remains high.

Database: Medline

14. Pulmonary arterial hypertension in pregnant women.

Author(s): Safdar, Zeenat

Source: Therapeutic advances in respiratory disease; Feb 2013; vol. 7 (no. 1); p. 51-63

Publication Date: Feb 2013

Publication Type(s): Research Support, N.i.h., Extramural Journal Article Review

PubMedID: 23060536

Abstract: Pulmonary arterial hypertension (PAH) is characterized by pulmonary vascular remodeling that limits the ability of the pulmonary vascular bed to withstand the physiological changes of pregnancy. Historically, pregnancy in PAH carries a high risk to the parturient. Normal pulmonary vasculature can withstand the hemodynamic and physiological changes associated with pregnancy without the development of respiratory symptomatology. However, in the presence of pulmonary vascular remodeling the capacity to handle these changes is compromised. During pregnancy, increase in cardiac output from the increased intravascular volume can lead to right heart failure. Therefore, all patients with PAH of childbearing potential should receive preconception counseling and be advised to use two methods of contraception. Patients with PAH should be advised against continuing pregnancy if they do become pregnant. According to the literature, deterioration in pregnancy mainly occurs in the second trimester and early in the third trimester; immediately postpartum is the most critical time for patients with PAH. In this review, we will discuss the recent advances in the management of parturient patients with PAH.

Database: Medline

15. The management of pregnancy and pregnancy-related medical conditions in pulmonary arterial hypertension patients.

Author(s): Hsu, C-H; Gomberg-Maitland, M; Glassner, C; Chen, J-H

Source: International journal of clinical practice. Supplement; Aug 2011 (no. 172); p. 6-14

Publication Date: Aug 2011

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article Review

PubMedID: 21736676

Abstract: Pulmonary arterial hypertension (PAH) is a complex disorder in which pulmonary arterial obstruction leads to elevated pulmonary arterial resistance and right ventricular failure. Normal physiologic changes that occur during pregnancy and immediately postpartum may produce fatal consequence in PAH patients. Pregnancy in patients with PAH has a high maternal mortality, estimated at 30-56%. Contemporary estimates of mortality are better but still prohibitively high. Current guidelines recommend that pregnancy be avoided or terminated early in women with PAH. Some patients, despite counselling by their physician, choose to continue with their pregnancy. In addition, some women first present with PAH during pregnancy leading to complex management issues in a high-risk patient. PAH-specific therapies may allow patients to better tolerate pregnancy. These patients should be treated by experienced physicians at tertiary care centres. This review article will focus on the management of the pregnant PAH patient and the preventative options available for this high-risk cohort.

Database: Medline

16. The pregnant patient with pulmonary artery hypertension-a review

Author(s): Frost E.A.M.

Source: Middle East Journal of Anesthesiology; Jun 2011; vol. 21 (no. 2); p. 199-208

Publication Date: Jun 2011

Publication Type(s): Review

PubMedID: 22435272

Database: EMBASE

17. Pregnancy and pulmonary hypertension.

Author(s): Lane, C Randall; Trow, Terence K

Source: Clinics in chest medicine; Mar 2011; vol. 32 (no. 1); p. 165

Publication Date: Mar 2011

Publication Type(s): Journal Article Review

PubMedID: 21277457

Abstract: When pulmonary hypertension (PH) occurs in pregnancy, physiologic stress can overwhelm an already strained right ventricle resulting in right ventricular failure and death. Mortality remains unacceptably high (25%-30%). Patients with PH should be counseled to avoid pregnancy. This article discusses the physiologic changes of pregnancy that make it difficult for patients with PH, the pitfalls of transthoracic echocardiography in diagnosing PH in pregnancy, and the historical data regarding mortality. The causes of development of PH during pregnancy are discussed, and the limited data on management of patients with PH who choose to carry their pregnancy to term are reviewed.

Database: Medline

18. Three cases of pregnancy in patients with severe pulmonary arterial hypertension: experience of a single unit.

Author(s): Cotrim, S Carlos; Loureiro, M José; Avillez, Teresa; Simões, Otília; Cordeiro, Pedro; Almeida, Sofia; Miranda, Rita; Almeida, Ana Rita; Carrageta, Manuel

Source: Revista portuguesa de cardiologia : orgao oficial da Sociedade Portuguesa de Cardiologia = Portuguese journal of cardiology : an official journal of the Portuguese Society of Cardiology; Jan 2010; vol. 29 (no. 1); p. 95-103

Publication Date: Jan 2010

Publication Type(s): Case Reports Journal Article Review

PubMedID: 20391902

Abstract: Pregnancy in patients with severe pulmonary arterial hypertension is a high risk situation, which makes pregnancy prevention or termination in the first trimester advisable. For this reason, patients of reproductive age with this pathology are referred for gynecology consultation. Since our unit began operating in 1999, we have had three pregnant patients with severe pulmonary arterial hypertension--one our patient and the other two referred from other centers. In this article we describe these three cases and review the literature on pregnancy and pulmonary arterial hypertension.

Database: Medline

19. Pulmonary hypertension in pregnancy: two cases and review of the literature.

Author(s): Higton, A M; Whale, C; Musk, M; Gabbay, E

Source: Internal medicine journal; Nov 2009; vol. 39 (no. 11); p. 766-770

Publication Date: Nov 2009

Publication Type(s): Case Reports Journal Article Review

PubMedID: 19912403

Available in full text at Internal Medicine Journal - from John Wiley and Sons

Abstract: Pulmonary arterial hypertension (PAH) in pregnancy carries a mortality of 30-56%. There are few published data to guide clinicians in its management. Two pregnant women with severe PAH have been treated at Royal Perth Hospital with a successful result in both. Their presentation and management are described. We review the physiological changes in pregnancy, pathophysiology in PAH, and review the literature describing treatment of PAH in pregnancy.

Database: Medline

20. Pulmonary hypertension and pregnancy.

Author(s): Madden, B P

Source: International journal of obstetric anesthesia; Apr 2009; vol. 18 (no. 2); p. 156-164

Publication Date: Apr 2009

Publication Type(s): Journal Article Review

PubMedID: 19223169

Abstract: Pulmonary hypertension is defined by a mean pulmonary artery pressure of greater than 25 mmHg at rest or 30 mmHg with exercise. It can occur in association with a variety of medical conditions. The most serious elevation in pulmonary artery pressures are seen in a group of conditions that share the histological entity of plexogenic pulmonary arteriopathy. Pulmonary hypertension may be missed or diagnosed late in the course of the illness. It is associated with a poor prognosis. Pulmonary hypertension carries a significant risk to mother and child during pregnancy and pregnant women with pulmonary hypertension require careful monitoring within the framework of a multidisciplinary team. Specific targeted therapy for pulmonary hypertension may be required during pregnancy. Many agents are contraindicated because of risks of teratogenicity or secretion into breast milk. The optimum mode of delivery is not clear but early input from the high-risk obstetric anaesthesia team is essential.

Database: Medline

21. Has there been any progress made on pregnancy outcomes among women with pulmonary arterial hypertension?

Author(s): Bédard, Elisabeth; Dimopoulos, Konstantinos; Gatzoulis, Michael A

Source: European heart journal; Feb 2009; vol. 30 (no. 3); p. 256-265

Publication Date: Feb 2009

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article Review

PubMedID: 19147605

Available in full text at European Heart Journal - from Oxford University Press ; Collection notes: To access please select Login with Athens and search and select NHS England as your institution before entering your NHS OpenAthens account details.

Abstract: Pregnancy in women with pulmonary arterial hypertension (PAH) is considered to be associated with prohibitive maternal mortality. During the past decade, new advanced therapies for PAH have emerged and progress in high-risk pregnancy management has been made. We examined whether these changes have improved outcomes in parturients with PAH. A systematic review of all cases of parturients with idiopathic pulmonary hypertension (iPAH), congenital heart disease associated with PAH (CHD-PAH), or PAH of other aetiology (oPH) published in the past decade (1997-2007) was performed. Outcome data from this study were then compared with relevant data published between 1978 and 1996. Forty-eight case reports or case series met the inclusion criteria, totalling 73 parturients with PAH. Seventy-two per cent of patients with iPAH were receiving advanced therapies, compared with 52% of CHD-PAH and 47% of oPH. Although a publication bias cannot be excluded, overall maternal mortality was significantly lower compared with previous era (25 vs. 38%, P = 0.047) and was 17% in iPAH, 28% in CHD-PAH, and 33% in oPH. Seventy-eight per cent of deaths occurred within the first month after delivery. Primigravidae and parturients who received general anaesthesia were at higher risk of death (OR 3.70, 95% CI 1.15-12.5, P = 0.03 and OR 4.37, 95% CI 1.28-16.50, P = 0.02, respectively). Maternal mortality in parturients with PAH remains prohibitively high, despite lower death rates than previous decades. Early advice on pregnancy risks, including contraception, remains paramount. Women with PAH who become pregnant warrant a multidisciplinary approach with consideration of advanced therapies.

Database: Medline

22. Treatment of pulmonary arterial hypertension in pregnancy

Author(s): Huang S.; DeSantis E.R.H.

Source: American Journal of Health-System Pharmacy; Sep 2007; vol. 64 (no. 18); p. 1922-1926

Publication Date: Sep 2007

Publication Type(s): Review

Available in full text at American Journal of Health-System Pharmacy - from EBSCOhost

Abstract: Purpose. The treatment of pulmonary arterial hypertension (PAH) in pregnancy is reviewed. Summary. PAH is a disease characterized by narrowing of the pulmonary arteries and increased vascular resistance. Women with PAH should avoid becoming pregnant, as the physiological, cardiovascular, and pulmonary changes that occur during pregnancy can exacerbate the condition. However, several viable treatment options are available to improve the outcomes in this patient population, including inhaled nitric oxide, calcium-channel blockers, targeted pulmonary vasodilators, and sildenafil. Epoprostenol, a naturally occurring prostaglandin and vasodilator, is a pregnancy category B drug. Reproductive studies in rats and rabbits have found no impaired fertility or fetal harm at 2.5-4.8 times the recommended human dosage of epoprostenol. Most of the published case reports describe initiating epoprostenol 2-4 ng/kg/min i.v. several weeks before or

near the time of delivery. Iloprost is a pregnancy category C drug but has demonstrated benefit in pregnant patients with PAH, with no congenital abnormalities and no postpartum maternal or infant mortality reported. Sildenafil causes vasodilation of the pulmonary vascular bed and vasodilation in the systemic circulation. Two case reports have described the successful treatment with sildenafil, a pregnancy category B drug, of pregnant patients with PAH. Patients with idiopathic PAH or chronic thromboembolic PAH should receive full-dose subcutaneous low-molecular-weight heparin therapy instead of warfarin for bleeding prophylaxis during pregnancy. Conclusion. Targeted pulmonary vasodilators are viable treatment options for pregnant patients with PAH. Early recognition and management of worsening symptoms are essential to improve outcomes for both the mother and infant.

Database: EMBASE

Strategy 251499

#	Database	Search term	Results
1	Medline	exp "HYPERTENSION, PULMONARY"/	31064
2	Medline	("pulmonary hypertension").ti,ab	30148
3	Medline	(1 OR 2)	42174
4	Medline	(pregn*).ti,ab	400467
5	Medline	exp PREGNANCY/	813001
6	Medline	(4 OR 5)	896516
7	Medline	(3 AND 6)	1557
8	Medline	7 [Document type Review] [Languages English]	301
9	EMBASE	exp "PULMONARY HYPERTENSION"/	76056
10	EMBASE	exp PREGNANCY/	672003
11	EMBASE	(9 AND 10)	1949
12	EMBASE	11 [Publication types Review] [English language]	376