Type Note
Date d'ajout Tuesday, July 10, 2012 7:15:05 PM
Modifié le Tuesday, July 10, 2012 7:15:41 PM

Embolie amniotique

En ce qui concerne les sources : Moteurs de recherche utilisés : Web of Science sur l'ensemble de la littérature scientifique répertoriés dans WOS – Medline sur l'ensemble des publications médicales recensés dans Pubmed. Après comparaison et exclusion des articles non pertinents (et de certains papiers inaccessibles), les résultats affichés sont les mêmes. Rq : Pubmed est accessible depuis WOS, je n'ai pas essayé.

Hélène C Juillet 2012

L'enquête confidentielle française sur les morts maternelles, 1996–2006 : quelles conséquences pour les soins en obstétrique ?

Type Article de revue
Auteur M.-H. Bouvier-Colle
Auteur M. Saucedo
Auteur C. Deneux-Tharaux
Résumé Résumé L'Enquête nationale confidentielle sur les morts maternelles (ENCMM) et son comité (CNEMM) ont pour but d'étudier tous les décès maternels survenant en France et d'en expertiser la prise en charge. Le présent rapport concerne les décès survenus depuis l'année 1996 – mise en place de l'ENCMM au niveau national – jusqu'à 2006. Après signalement des décès potentiellement maternels par le Centre d'étude épidémiologique sur les causes médicales de décès (CépiDC) et acceptation des médecins concernés, deux assesseurs (un anesthésiste-réanimateur et un gynécologue-obstétricien) collectent les informations médicales et obstétricales auprès de l'équipe ayant traité la femme au moyen d'un questionnaire standard détaillé. Les dossiers complètement anonymes sont expertisés par le CNEMM. Des taux de mortalité maternelle ont été calculés par période ; la répartition des causes obstétricales de décès a été étudiée, ainsi que les caractéristiques des femmes décédées. L'évitabilité des décès et ses principaux facteurs ont été estimés par groupe de pathologies. De 1996 à 2006, 729 décès maternels ont été retenus dont 553 ont été expertisés. La plupart des décès maternels sont de cause obstétricale directe (73 %), principalement hémorragies (22 %), embolie amniotique (12 %), complications de l'HTA et thromboembolies (environ 10 % chacune). Les décès de causes obstétricales directes ont été jugés évitables à 50 %, et tout particulièrement les décès liés à l'hémorragie ou le sepsis. Les facteurs d'évitabilité sont principalement le retard à l'intervention thérapeutique (31 %), le traitement inadapté (28 %), voire la faute professionnelle (20 %), l'absence de diagnostic (15 %) ou la patiente irresponsable (7 %). Sept décès sont décrits en détail dans une section spéciale et discutés en incluant des recommandations sur comment améliorer les soins. Summary The national confidential enquiry into maternal deaths (ENCMM) and its committee (CNEMM) have the target to study all maternal deaths occurring in France, in order to expertise the care provided. The current report covers the 1996 – year of the ENCMM establishment – to

2006 years. After being informed of the potential maternal deaths by the Epidemiological center on medical causes of deaths (CépiDC), and agreement from the medical doctors concerned, two assessors (one anesthetist and one obstetrician) gather the medical or obstetrical information near the team involved in the care of the women, by the mean of a detailed and specific questionnaire. The completely anonymous files are expertised by the CNEMM. Maternal mortality rates have been calculated by periods, the distribution of the obstetrical causes and the characteristics of the dead women were calculated too. The substandard care and the avoidability of deaths were estimated by subgroup. Since 1996 to 2006, 729 maternal deaths were included of which 553 were expertised. The majority of maternal deaths were due to direct obstetrical causes (73%) mainly haemorrhages (22%), amniotic fluid embolism (12%), complications of hypertension (10 %), and venous thrombo-embolism (around 10 % each). Half of maternal deaths were considered preventable by the CNEMM, particularly haemorrhage and sepsis. The factors of avoidability are delay to treat (31%) inadapted therapeutics (28%), even professional default (20%) no diagnosis (15%) or reluctant patient (7%). Seven deaths are discussed in a specific section including a detailed description of, and recommendations on how the quality of care may be improved.

Publication Journal de Gynécologie Obstétrique et Biologie de la Reproduction
Volume 40
Numéro 2
Pages 87-102
Date avril 2011
DOI 10.1016/j.jgyn.2010.12.007
ISSN 0368-2315
Titre abrégé L’enquête confidentielle française sur les morts maternelles, 1996–2006
URL http://www.sciencedirect.com/science/article/pii/S0368231510003480
Consulté le Tuesday, July 10, 2012 7:55:36 PM
Catalogue de bibl. ScienceDirect
Date d'ajout Tuesday, July 10, 2012 7:55:36 PM
Modifié le Tuesday, July 10, 2012 7:55:36 PM

Marqueurs :

Causes obstétricales de décès, Confidential enquiries, Enquête confidentielle, Maternal Mortality, Mortalité maternelle, Obstetrical causes of death, Soins non optimaux, Substandard health care

Pièces jointes

- ScienceDirect Snapshot

Incidence and risk factors for amniotic-fluid embolism

Type Article de revue
Auteur Marian Knight
Auteur Derek Tuffnell
Auteur Peter Brocklehurst

Auteur Patsy Spark
Auteur Jennifer J Kurinczuk

Résumé OBJECTIVE To estimate the incidence of amniotic-fluid embolism and to describe risk factors, management, and outcomes. METHODS Through a population-based cohort study and nested case-control analysis, using the UK Obstetric Surveillance System, we identified 60 women in the United Kingdom who had an amniotic-fluid embolism between February 2005 and February 2009 and 1,227 women for the control group. We investigated the potential factors underlying amniotic-fluid embolism using an exploratory logistic regression analysis to estimate odds ratios (ORs) and 95% confidence intervals (CIs). RESULTS Sixty cases of amniotic-fluid embolism were reported, an estimated incidence of 2.0 per 100,000 deliveries (95% CI 1.5-2.5). Amniotic-fluid embolism occurrence was significantly associated with induction of labor (adjusted OR 3.86, 95% CI 2.04-7.31) and multiple pregnancy (adjusted OR 10.9, 95% CI 2.81-42.7); an increased risk also was noted in older, ethnic-minority women (adjusted OR 9.85, 95% CI 3.57-27.2). Cesarean delivery was associated with postnatal amniotic-fluid embolism (adjusted OR 8.84, 95% CI 3.70-21.1). Twelve women died (case fatality 20%, 95% CI 11-32%); 5 of 37 newborns of women with antenatal amniotic-fluid embolism died (perinatal mortality 135 per 1,000 total births, 95% CI 45-288). Women who died were significantly more likely to be from ethnic-minority groups (adjusted OR 11.8, 95% CI 1.40-99.5). CONCLUSION High-quality supportive care can result in good maternal outcomes after amniotic-fluid embolism. Clinicians should consider both the risks and benefits of induction and cesarean delivery because more restricted use may result in a decrease in the number of women suffering a potentially fatal amniotic-fluid embolism. The observed increased risk of fatality in ethnic-minority women may be associated with differences in underlying medical conditions or access to care, and clinicians should that ensure appropriate services are provided to minimize this risk.

Publication Obstetrics and gynecology
Volume 115
Numéro 5
Pages 910-917
Date May 2010
Abrév. de revue Obstet Gynecol
DOI 10.1097/AOG.0b013e3181d9f629
ISSN 1873-233X
URL http://www.ncbi.nlm.nih.gov/pubmed/20410762
Consulté le Tuesday, July 10, 2012 7:11:41 PM
Catalogue de bibl. NCBI PubMed
Extra PMID: 20410762
Date d'ajout Tuesday, July 10, 2012 7:11:41 PM
Modifié le Tuesday, July 10, 2012 7:11:41 PM

Marqueurs :

Adult, Cesarean Section, Embolism, Amniotic Fluid, Female, Fetal Membranes, Premature Rupture, Great Britain, Humans, Incidence, Infant, Newborn, Logistic Models, Population Surveillance, Pregnancy, Pregnancy Outcome, Risk Factors

Pièces jointes

- Knight et al. - 2010 - Incidence and risk factors for amniotic-fluid embo.pdf

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Amniotic fluid embolism in an Australian population-based cohort

Type	Article de revue
Auteur	Cl Roberts
Auteur	Cs Algert
Auteur	M Knight
Auteur	Jm Morris
Résumé	Please cite this paper as: Roberts C, Algert C, Knight M, Morris J. Amniotic fluid embolism in an Australian population-based cohort. BJOG 2010;117:1417–1421.We utilised linked birth, hospital and death data for the entire population to determine the incidence of amniotic fluid embolism (AFE) and its mortality and morbidity. AFE diagnoses were identified from International Classification of Diseases, 10th Revision (ICD10)-coded hospital and/or death records with additional case definition criteria imposed. The AFE incidence was 3.3 per 100 000 (95% CI, 1.9–4.7), maternal fatality rate 35% (95% CI, 15–59) and perinatal mortality rate 32% (95% CI, 12–56). Newly identified risk factors included induction with vaginal prostaglandin and manual removal of the placenta, and survivors were at increased risk of cerebral infarction. Although two-thirds of women and infants survived, AFE also caused severe morbidity.
Publication	BJOG: An International Journal of Obstetrics & Gynaecology
Volume	117
Numéro	11
Pages	1417–1421
Date	2010
Langue	en
DOI	10.1111/j.1471-0528.2010.02656.x
ISSN	1471-0528
URL	http://onlinelibrary.wiley.com/doi/10.1111/j.1471-0528.2010.02656.x/abstract
Consulté le	Tuesday, July 10, 2012 7:13:00 PM
Catalogue de bibl.	Wiley Online Library
Autorisations	© 2010 The Authors Journal compilation © RCOG 2010 BJOG An International Journal of Obstetrics and Gynaecology
Date d'ajout	Tuesday, July 10, 2012 7:13:00 PM
Modifié le	Tuesday, July 10, 2012 7:13:00 PM

Marqueurs :

Amniotic fluid embolism, cohort study, disseminated intravascular coagulation, Maternal Mortality, Perinatal Mortality, record linkage

Pièces jointes

- Roberts et al. - 2010 - Amniotic fluid embolism in an Australian populatio.pdf

Amniotic fluid embolism: an evidence-based review

Type	Article de revue
Auteur	Agustín Conde-Agudelo
Auteur	Roberto Romero
Résumé	We conducted an evidence-based review of information about amniotic fluid embolism (AFE). The estimated incidence of AFE is 1:15,200 and 1:53,800 deliveries in North America and Europe, respectively. The case fatality rate and perinatal mortality associated with AFE are 13-30% and 9-44%, respectively. Risk factors associated with an increased risk of AFE include advanced maternal age, placental abnormalities, operative deliveries, eclampsia, polyhydramnios, cervical lacerations, and uterine rupture. The hemodynamic response in AFE is biphasic, with initial pulmonary hypertension and right ventricular failure, followed by left ventricular failure. Promising therapies include selective pulmonary vasodilators and recombinant activated factor VIIa. Important topics for future research are presented.
Publication	American Journal of Obstetrics and Gynecology
Volume	201
Numéro	5
Pages	445.e1-445.e13
Date	11/2009
DOI	10.1016/j.ajog.2009.04.052
ISSN	00029378
Titre abrégé	Amniotic fluid embolism
URL	http://www.ajog.org/article/S0002-9378(09)00444-X/abstract
Consulté le	Tuesday, July 10, 2012 7:49:03 PM
Catalogue de bibl.	CrossRef
Date d'ajout	Tuesday, July 10, 2012 7:49:03 PM
Modifié le	Tuesday, July 10, 2012 7:49:21 PM

Pièces jointes

- Amniotic fluid embolism: an evidence-based review

Amniotic fluid embolism: still a diagnostic enigma for obstetrician and pathologist?

Type	Article de revue
Auteur	Emanuela Turillazzi
Auteur	Pantaleo Greco
Auteur	Margherita Neri
Auteur	Cristoforo Pomara
Auteur	Irene Riezzo
Auteur	Vittorio Fineschi

Résumé Eight fatal cases of amniotic fluid embolism (AFE) are described to identify definable and preventable risk factors increasing the incidence of AFE. Maternal age, past medical history, previous pregnancies and outcome, prenatal care, gestational age, neonatal outcome, mode of delivery, time of the onset of clinical symptoms, and maternal autopsy findings were retrospectively analyzed. Risk factors and clinical manifestations present in the patients were investigated. Peripartum clinical information included tachycardia and shock as the most frequent symptoms (62.5%), while bradycardia and coma were present in 37.5% of the victims. The interval between onset of labor and symptoms ranged between 0.4 and 7.5 hours. All the women died within seven hours of the onset of the symptoms. AFE can neither be predicted nor prevented as cases occur sporadically with a broad spectrum of clinical manifestations that are less consistent than that previously reported.

Publication Acta obstetricia et gynecologica Scandinavica
Volume 88
Numéro 7
Pages 839-841
Date 2009
Abrév. de revue Acta Obstet Gynecol Scand
DOI 10.1080/00016340902971474
ISSN 1600-0412
Titre abrégé Amniotic fluid embolism
URL http://www.ncbi.nlm.nih.gov/pubmed/19449220
Consulté le Tuesday, July 10, 2012 7:52:00 PM
Catalogue de bibl. NCBI PubMed
Extra PMID: 19449220
Date d'ajout Tuesday, July 10, 2012 7:52:00 PM
Modifié le Tuesday, July 10, 2012 7:52:00 PM

Marqueurs :

Adult, Autopsy, Diagnosis, Differential, Embolism, Amniotic Fluid, Female, Humans, Italy, Pregnancy, Retrospective Studies, Risk Factors

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Amniotic Fluid Embolism

Type Article de revue
Auteur Richard S. Gist
Auteur Irene P. Stafford
Auteur Andrew B. Leibowitz
Auteur Yaakov Beilin

Résumé Amniotic fluid embolism is one of the most catastrophic complications of pregnancy. First described in 1941, the condition is exceedingly rare and the exact pathophysiology is still unknown. The etiology was thought to be embolic in nature, but more recent evidence suggests an immunologic basis. Common presenting symptoms include dyspnea, nonreassuring fetal status, hypotension, seizures, and disseminated intravascular coagulation. Early recognition of

amniotic fluid embolism is critical to a successful outcome. However, despite intensive resuscitation, outcomes are frequently poor for both infant and mother. Recently, aggressive and successful management of amniotic fluid embolism with recombinant factor VIIa and a ventricular assist device, inhaled nitric oxide, cardiopulmonary bypass and intraaortic balloon pump with extracorporeal membrane oxygenation have been reported and should be considered in select cases.

Publication Anesthesia and analgesia
Volume 108
Numéro 5
Pages 1599-1602
Date 2009
Titre de la coll. Anesthesia and analgesia
Langue eng
ISSN 0003-2999
URL http://cat.inist.fr/?aModele=afficheN&…
Consulté le Tuesday, July 10, 2012 7:53:20 PM
Catalogue de bibl. cat.inist.fr
Date d'ajout Tuesday, July 10, 2012 7:53:20 PM
Modifié le Tuesday, July 10, 2012 7:54:40 PM

Marqueurs :

Amniotic embolism, Anestesia, Anesthesia, Anesthésie, Embolia amniótica, Embolie amniotique

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Amniotic Fluid Embolism: a Comparison between Patients Who Survived and Those Who Died

Type Article de revue
Auteur Y Matsuda
Auteur M Kamitomo
Résumé This study aimed to investigate comparative clinical courses for a series of women with amniotic fluid embolism (AFE) and to assess factors associated with patient survival. Clinical courses of nine patients with AFE in a single tertiary centre were reviewed. AFE was diagnosed when a woman presented with typical clinical symptoms accompanied by abnormal laboratory tests (including abnormal coagulation) or at autopsy when fetal debris was found in the maternal pulmonary arteries. Five patients survived and four died. The first clinical manifestations of AFE were variable; dyspnoea was noted in only four patients. Other signs were state of shock, abdominal pain and uterine atony. The mean ± SD interval between the onset of clinical manifestations and treatment was significantly shorter for survivors (48.0 ± 36.3 min) than for non-survivors (137.5 ± 49.7 min). The number of failed organs was significantly fewer for the survivors compared with the non-survivors. AFE was accompanied by a wide variety of clinical manifestations, but early diagnosis and treatment appeared to be the most critical factors associated with survival.
Publication J Int Med Res
Volume 5

Numéro 37
Pages 1515-1521
Date 2009
URL http://www.jimronline.net/article/1280/
Date d'ajout Tuesday, July 10, 2012 8:01:03 PM
Modifié le Tuesday, July 10, 2012 8:02:31 PM

Critical care in obstetrics: pregnancy-specific conditions

Type Article de revue
Auteur Jennifer Williams
Auteur Ellen Mozurkewich
Auteur Julie Chilimigras
Auteur Cosmas Van De Ven
Résumé This chapter summarizes the clinical presentation, pathophysiology, evaluation and management of six commonly encountered complications unique to pregnancy that require critical care management: obstetric haemorrhage; pre-eclampsia/HELLP (haemolysis–elevated liver enzymes–low platelets) syndrome; acute fatty liver of pregnancy; peripartum cardiomyopathy; amniotic fluid embolism; and trauma.
Publication Best Practice & Research Clinical Obstetrics & Gynaecology
Volume 22
Numéro 5
Pages 825-846
Date octobre 2008
DOI 10.1016/j.bpobgyn.2008.06.003
ISSN 1521-6934
Titre abrégé Critical care in obstetrics
URL http://www.sciencedirect.com/science/article/pii/S1521693408000813
Consulté le Tuesday, July 10, 2012 7:48:02 PM
Catalogue de bibl. ScienceDirect
Date d'ajout Tuesday, July 10, 2012 7:48:02 PM
Modifié le Tuesday, July 10, 2012 7:48:02 PM

Marqueurs :

acute fatty liver, Amniotic fluid embolism, obstetric haemorrhage, peripartum cardiomyopathy, pre-eclampsia/HELLP syndrome, trauma

Pièces jointes

- ScienceDirect Snapshot

Incidence and risk factors of amniotic fluid embolisms: a population-based study

on 3 million births in the United States

Type Article de revue
Auteur Haim A. Abenhaim
Auteur Laurent Azoulay
Auteur Michael S. Kramer
Auteur Line Leduc
Résumé Objective Amniotic fluid embolism (AFE) is a condition occurring during delivery that can lead to severe maternal morbidity and mortality. Given the rarity of its occurrence, current estimates and predictors of the incidence and outcomes are often difficult to obtain. Study Design We conducted a population-based cohort study on 3 million birth records in the Healthcare Cost and Utilization Project–Nationwide Inpatient Sample from 1999 to 2003 to estimate the incidence and case fatality of AFEs. Logistic regression was used to calculate the odds ratio (OR) and corresponding 95% confidence intervals (CIs) of demographic and obstetrical determinants of AFEs and fatal AFEs. Results The overall incidence of AFE was 7.7 per 100,000 births (95% CI 6.7 to 8.7), with a case fatality rate of 21.6% (95% CI 15.5 to 27.6%). AFE was associated with maternal age greater than 35 (OR 2.2, 95% CI 1.5 to 2.1), placenta previa (OR 30.4, 95% CI 15.4 to 60.1), and cesarean delivery (OR 5.7, 95% CI 3.7 to 8.7). Although AFEs were not significantly associated with induction of labor (OR 1.5, 95% CI 0.9 to 2.3), they were associated with preeclampsia, abruptio placentae, and the use of forceps. Among women with an AFE, common demographic or obstetrical determinants were not predictive of maternal mortality. Conclusion AFE is a rare but serious condition that is associated with advanced maternal age, placental pathologies, and cesarean deliveries. Further research on the treatment of this condition is necessary.
Publication American Journal of Obstetrics and Gynecology
Volume 199
Numéro 1
Pages 49.e1-49.e8
Date 7/2008
DOI 10.1016/j.ajog.2007.11.061
ISSN 00029378
Titre abrégé Incidence and risk factors of amniotic fluid embolisms
URL http://www.ajog.org/article/S0002-9378(07)02243-0/abstract
Consulté le Tuesday, July 10, 2012 7:56:47 PM
Catalogue de bibl. CrossRef
Date d'ajout Tuesday, July 10, 2012 7:56:47 PM
Modifié le Tuesday, July 10, 2012 7:57:04 PM

Pièces jointes

- Incidence and risk factors of amniotic fluid embolisms: a population-based study on 3 million births in the United States

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Maternal death in the 21st century: causes, prevention, and relationship to cesarean delivery

Type Article de revue
Auteur Steven L. Clark
Auteur Michael A. Belfort
Auteur Gary A. Dildy
Auteur Melissa A. Herbst
Auteur Janet A. Meyers
Auteur Gary D. Hankins
Résumé Objective We sought to examine etiology and preventability of maternal death and the causal relationship of cesarean delivery to maternal death in a series of approximately 1.5 million deliveries between 2000 and 2006. Study Design This was a retrospective medical records extraction of data from all maternal deaths in this time period, augmented when necessary by interviews with involved health care providers. Cause of death, preventability, and causal relationship to mode of delivery were examined. Results Ninety-five maternal deaths occurred in 1,461,270 pregnancies (6.5 per 100,000 pregnancies.) Leading causes of death were complications of preeclampsia, pulmonary thromboembolism, amniotic fluid embolism, obstetric hemorrhage, and cardiac disease. Only 1 death was seen from placenta accreta. Twenty-seven deaths (28%) were deemed preventable (17 by actions of health care personnel and 10 by actions of non-health care personnel). The rate of maternal death causally related to mode of delivery was 0.2 per 100,000 for vaginal birth and 2.2 per 100,0000 for cesarean delivery, suggesting that the number of annual deaths resulting causally from cesarean delivery in the United States is about 20. Conclusion Most maternal deaths are not preventable. Preventable deaths are equally likely to result from actions by nonmedical persons as from provider error. Given the diversity of causes of maternal death, no systematic reduction in maternal death rate in the United States can be expected unless all women undergoing cesarean delivery receive thromboembolism prophylaxis. Such a policy would be expected to eliminate any statistical difference in death rates caused by cesarean and vaginal delivery.
Publication American Journal of Obstetrics and Gynecology
Volume 199
Numéro 1
Pages 36.e1-36.e5
Date 7/2008
DOI 10.1016/j.ajog.2008.03.007
ISSN 00029378
Titre abrégé Maternal death in the 21st century
URL http://www.ajog.org/article/S0002-9378(08)00268-8/abstract
Consulté le Tuesday, July 10, 2012 7:57:48 PM
Catalogue de bibl. CrossRef
Date d'ajout Tuesday, July 10, 2012 7:57:48 PM
Modifié le Tuesday, July 10, 2012 7:58:01 PM

Pièces jointes

- Maternal death in the 21st century: causes, prevention, and relationship to cesarean delivery

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Making pregnancy safer in Australia: The importance of maternal death review

Type Article de revue
Auteur Sue Kildea
Auteur Wendy Elizabeth Pollock
Auteur Lesley Barclay
Résumé Australia is one of the safest countries in the world to birth. Because maternal deaths are rare, often the focus during pregnancy is on the well-being of the fetus. The relative safety of birth has fostered a shift in the focus of maternal health, from survival, to the model of care or the birth experience. Yet women still die in Australia as a result of child bearing and many of these deaths are associated with avoidable factors. The purpose of this paper is to outline the maternal death monitoring and review process in Australia and to present to clinicians the salient features of the most recently published Australian maternal death report. The notion of preventability and the potential for practice to have an effect on reducing maternal mortality are also discussed.
Publication Australian and New Zealand Journal of Obstetrics and Gynaecology
Volume 48
Numéro 2
Pages 130–136
Date 2008
Langue en
DOI 10.1111/j.1479-828X.2008.00846.x
ISSN 1479-828X
Titre abrégé Making pregnancy safer in Australia
URL http://onlinelibrary.wiley.com/doi/10.1111/j.1479-828X.2008.00846.x/abstract
Consulté le Tuesday, July 10, 2012 7:56:19 PM
Catalogue de bibl. Wiley Online Library
Autorisations
Date d'ajout Tuesday, July 10, 2012 7:56:19 PM
Modifié le Tuesday, July 10, 2012 7:56:19 PM

Marqueurs :

aboriginal, Australia, clinician, indigenous, maternal death, Maternal Mortality

Pièces jointes

- Snapshot

Biochemical and electrophoretic studies of erythrocyte pyridoxine kinase in white and black Americans

Type Article de revue
Auteur C J Chern
Auteur E Beutler
Résumé The mean PNK activity in red blood cells from black subjects was only about 40% of that in whites. Among 51 whites examined, one was found to have enzyme deficiency. The estimated gene frequencies for PNKH (the common

allele in whites which codes for higher enzyme activity) and PNKL (the common allele in blacks which codes for lower enzyme activity) were .35 and .65, respectively, for black donors, and .81 and .19, respectively, for white donors, The variant enzyme in persons with enzyme deficiency was associated with an increased rate of degradation in red cells during aging. No other biochemical or electrophoretic differences were detected.

Publication American journal of human genetics
Volume 28
Numéro 1
Pages 9-17
Date Jan 1976
Abrév. de revue Am. J. Hum. Genet.
ISSN 0002-9297
URL http://www.ncbi.nlm.nih.gov/pubmed/2009
Consulté le Tuesday, July 10, 2012 7:59:00 PM
Catalogue de bibl. NCBI PubMed
Extra PMID: 2009
Date d'ajout Tuesday, July 10, 2012 7:59:00 PM
Modifié le Tuesday, July 10, 2012 7:59:00 PM

Marqueurs :

African Continental Ancestry Group, Alleles, Erythrocytes, European Continental Ancestry Group, Gene Frequency, Genes, Hexokinase, Humans, Hydrogen-Ion Concentration, Pedigree, Phenotype, Phosphotransferases, Temperature, United States

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Poly(8-aminoguanylic acid): formation of ordered self-structures and interaction with poly(cytidylic acid)

Type Article de revue
Auteur M Hattori
Auteur J Frazier
Auteur H T Miles
Résumé Poly(8-aminoguanylic acid) has in neutral solution a novel ordered structure of high stability. The 8-amino group permits formation of three hydrogen bonds between two residues along the "top", or long axis, of the purines. The usual hydrogen bonding protons and Watson-Crick pairing sites are not involved in the association. The bonding scheme has a twofold rotation axis and is hemiprotonated at N(7). Poly(8NH2G) is converted by alkaline titration (pK = 9.7) to a quite different ordered structure, which is the favored form over the range approximately pH 10-11. The bonding scheme appears to be composed of a planar, tetrameric array of guanine residues, in which the 8-amino group does not participate in interbase hydrogen bonding. Poly (8NH2G) does not interact with poly(C) in neutral solution because of the high stability of the hemiprotonated G-G self-structure. Titration to the alkaline plateau, however, permits ready formation of a two-stranded Watson-Crick helix. In contrast to the monomer 8NH2GMP, poly(8NH2G) does not form a triple helix with poly(C) under any

conditions. The properties of the ordered structures are interpreted in terms of a strong tendency of the 8-amino group to form a third interbase hydrogen bond, when this possibility is not prevented by high pH.

Publication Biochemistry
Volume 14
Numéro 23
Pages 5033-5045
Date Nov 18, 1975
Abrév. de revue Biochemistry
ISSN 0006-2960
Titre abrégé Poly(8-aminoguanylic acid)
URL http://www.ncbi.nlm.nih.gov/pubmed/37
Consulté le Tuesday, July 10, 2012 7:59:02 PM
Catalogue de bibl. NCBI PubMed
Extra PMID: 37
Date d'ajout Tuesday, July 10, 2012 7:59:02 PM
Modifié le Tuesday, July 10, 2012 7:59:02 PM

Marqueurs :

Binding Sites, Circular Dichroism, Drug Stability, Escherichia coli, Hydrogen Bonding, Hydrogen-Ion Concentration, Micrococcus, Models, Molecular, Nucleic Acid Conformation, Poly C, Poly G, Polyribonucleotide Nucleotidyltransferase, Polyribonucleotides, Spectrophotometry, Infrared, Spectrophotometry, Ultraviolet, Temperature