PRÓ-REITORIA DE PESQUISA E PÓS-GRADUAÇÃO
MESTRADO EM CIÊNCIAS DA SAÚDE

FLÁVIA KRASUCKI BERNARDI

COMPARAÇÃO DE RESULTADOS PERINATAIS ENTRE MÃES ADOLESCENTES E ADULTAS EM UM HOSPITAL DO OESTE PAULISTA

Presidente Prudente-SP
2023

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Dissertação apresentada à Pró-Reitoria de pesquisa e Pós-graduação, Universidade do Oeste Paulista, como parte dos requisitos para obtenção do título de Mestre em Ciências da Saúde. – Área de concentração: Ciências da Saúde.

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Presidente Prudente, 11 de setembro de 2023.

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RESUMO

Comparação de resultados perinatais entre mães adolescentes e adultas em um hospital do oeste paulista

A gravidez na adolescência é considerada uma situação de vulnerabilidade que impacta a vida da mãe e do bebê em relação a vários aspectos. Na região do Oeste Paulista são escassos os dados sobre a gestação na adolescência. Este estudo visou comparar os resultados perinatais de mulheres adolescentes e adultas em um Hospital do Oeste Paulista entre os anos de 2017 a 2020. Os dados coletados foram: idade materna, número de consultas realizadas no pré-natal, idade gestacional, tipo de parto, anestesia, Apgar e peso do recém-nascido ao nascer. Foram analisados dados de 1136 (15,2%) de gestantes adolescentes e 6.329 (84,8%) de adultas. O parto espontâneo foi registrado em 48,5% das adolescentes e em 33,1% das adultas. O peso médio dos neonatos das mães adolescentes foi um pouco inferior aos das adultas. Em relação ao pré-natal, a média das mulheres adultas (8,52) foi um pouco superior aos das adolescentes (8,16) ($p<0,001$). Entre as adolescentes, foi observada a média de 1,3 gestações prévias e nas adultas 2,4. Não foram encontradas diferenças significativas em relação a idade gestacional, Apgar1 e Apgar5. Não foram observados fatores que afetaram os desfechos das gestações entre mães adolescentes e adultas, demonstrando que a assistência perinatal se encontra de forma satisfatória na região abrangida pelo estudo. Os dados obtidos são importantes para implementação de políticas públicas educacionais para melhorar a orientação dos jovens na rede escolar e contribuir para a manutenção e para melhorias nos resultados de atendimento perinatal na região do Oeste Paulista.

Palavras-chave: gravidez; adolescência; recém-nascido; maternidade.

ABSTRACT

Comparison of perinatal results between adolescent and adult mothers at a oeste paulista's hospital

Teenage pregnancy is considered a vulnerable situation that impacts the lives of the mother and baby in several aspects. In the West São Paulo region, data on teenage pregnancy is scarce. This study aimed to compare the perinatal results of adolescent and adult women at a Hospital in Oeste Paulista between the years 2017 and 2020. The data collected were: maternal age, number of prenatal consultations, gestational age, type of delivery, anesthesia, Apgar and birth weight of the newborn. Data from 1,136 (15.2%) pregnant adolescents and 6,329 (84.8%) adult women were analyzed. Spontaneous birth was recorded in 48.5% of adolescents and in 33.1% of adults. The average weight of newborns from teenage mothers was slightly lower than that of adults. In relation to prenatal care, the average for adult women (8.52) was slightly higher than that for adolescents (8.16) ($p<0.001$). Among adolescents, an average of 1.3 previous pregnancies was observed and among adults, 2.4. No significant differences were found in relation to gestational age, Apgar1 and Apgar5. No factors were observed that affected the outcomes of pregnancies among adolescent and adult mothers, demonstrating that perinatal care is satisfactory in the region covered by the study. The data obtained is important for the implementation of public educational policies to improve the guidance of young people in the school network and contribute to the maintenance and improvements in the results of perinatal care in the West Paulista region.

Keywords: pregnancy; adolescence; newborn; motherhood.

LISTA DE SIGLAS

BPN - Baixo Peso ao Nascer
DRS - Divisão Regional de Saúde
OMS - Organização Mundial de Saúde
RN - Recém nascido
SUS - Sistema Único de Saúde

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ARTIGO CIENTÍFICO

O trabalho está apresentado sob forma de artigo, segundo as normas do periódico o qual será submetido: Jornal de Pediatria, Fator de Impacto 3,3 Qualis A3

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RESUMO

A gravidez na adolescência é considerada uma situação de vulnerabilidade que impacta a vida da mãe e do bebê em relação a vários aspectos. Na região do Oeste Paulista são escassos os dados sobre a gestação na adolescência. Este estudo visou comparar os resultados perinatais de mulheres adolescentes e adultas em um Hospital do Oeste Paulista entre os anos de 2017 a 2020. Os dados coletados foram: idade materna, número de consultas realizadas no pré-natal, idade gestacional, tipo de parto, anestesia, Apgar e peso do recém-nascido ao nascer. Foram analisados dados de 1136 (15,2%) de gestantes adolescentes e 6.329 (84,8%) de adultas. O parto espontâneo foi registrado em 48,5% das adolescentes e em 33,1% das adultas. O peso médio dos neonatos das mães adolescentes foi um pouco inferior aos das adultas. Em relação ao pré-natal, a média das mulheres adultas (8,52) foi um pouco superior aos das adolescentes (8,16) ($p<0,001$). Entre as adolescentes, foi observada a média de 1,3 gestações prévias e nas adultas 2,4. Não foram encontradas diferenças significativas em relação a idade gestacional, Apgar1 e Apgar5. Não foram observados fatores que afetaram os desfechos das gestações entre mães adolescentes e adultas, demonstrando que a assistência perinatal se encontra de forma satisfatória na região abrangida pelo estudo. Os dados obtidos são importantes para implementação de políticas públicas educacionais para melhorar a orientação dos jovens na rede escolar e contribuir para a manutenção e para melhorias nos resultados de atendimento perinatal na região do Oeste Paulista.

Palavras-chave: gravidez, adolescência, recém-nascido, maternidade

1 INTRODUÇÃO

A gravidez na adolescência é considerada uma situação de vulnerabilidade, que impacta a vida da genitora e do neonato em relação aos aspectos sociais, de acessibilidade aos serviços de saúde e dos fenômenos biológicos [1]. Segundo a Organização Mundial de Saúde (OMS) [2], a adolescência compreende os indivíduos com idade entre 10 a 19 anos e cerca de 21 milhões de mulheres nesta faixa etária engravidam a cada ano, resultando em cerca de 12 milhões de nascimentos.

Dados da organização Pan-americana de Saúde apontam o Brasil como o país da América Latina que registrou uma das maiores taxas de gestações na adolescência no ano de 2016 (68,4 nascidos vivos a cada mil mulheres adolescentes) [3]. Em 2018, 15,5% do total de partos (456.128 nascimentos) foram no Brasil e em 2019, observou-se redução para 14,7% do total de partos no país (419.252 nascimentos), porém estudos apontam 19.330 nascimentos de mães com até 14 anos [4]. Em países de alta renda, as taxas de gestações na adolescência são menores, devido a fatores socioeconômicos e culturais. Na Espanha, a frequência das gestações entre mulheres de 15 a 19 anos é de 0,73%, devido ao nível sociocultural, implementação de programas de educação sexual e disponibilidade de métodos contraceptivos[5].

Além disso, a prevalência da gravidez de repetição em mulheres jovens é preocupante no Brasil. Um estudo realizado em 2020 revelou que a taxa de gravidez recorrente foi de 29,1% no Brasil e de 15,9% a 20,9% países norte-americanos[4]. Uma estimativa da OMS revela que a taxa de gravidez na adolescência tende a crescer em todo mundo até o final de 2030, e projeta-se um aumento significativo no continente africano[6].

Alguns índices, tais como o peso do recém-nascido e o Apgar, são importantes para o estudo do impacto da idade da gestante na saúde do bebê. O baixo peso ao nascer (BPN) é definido pela OMS como inferior a 2,5kg[7] e se apresenta como um importante problema de saúde, pois está associado com mortalidade neonatal [8]. É estimado que 15 a 20% dos recém-nascidos no mundo apresentam BPN, o que representa mais de 20 milhões nascimentos por ano. Além disso, existem variações nas proporções de BPN entre as regiões, tais como 28% no sul da Ásia, 13% na África Subsaariana e 9% na América Latina[8].

O Apgar considera a frequência cardíaca, o esforço respiratório, o tônus muscular, a coloração da pele e a irritabilidade reflexa[9]. Cada parâmetro tem alternativas de resposta com pontuações que variam de 0 a 2, e o somatório das respostas gera um valor entre 0 e 10. Quanto maior o valor de Apgar, melhores são as condições do recém-nascido[10].

Recomenda-se a avaliação no primeiro e no quinto minutos de vida do neonato[9]. Para bebês com somatório menor que 7 no quinto minuto, o Ministério da Saúde recomenda reavaliações a cada cinco minutos, até os 20 minutos de vida [11].

Estudos apontam que a gravidez em mulheres jovens é um risco maior para a ocorrência de resultados adversos no parto, tal como nascimentos prematuros, baixo peso ao nascer, recém-nascido pequeno para a idade gestacional, baixo índice de Apgar, além da mortalidade neonatal e materna [12]. As complicações gestacionais e associadas ao parto são consideradas a segunda causa de morte entre adolescentes. Entre os nascidos de mães adolescentes, a prevalência de morte nos períodos neonatal e infantil é significativamente maior quando comparada à de nascidos de mães de outras faixas etárias [4].

Os impactos sociais para a mãe jovem também são consideráveis e estão relacionados a baixos níveis de escolaridade, menos oportunidades de emprego, problemas relacionados a saúde mental, menos apoio social e mais chances de abuso de substâncias químicas, quando comparadas a mulheres que engravidam na vida adulta [13]. Já as crianças nascidas de mães jovens apresentam uma educação mais precária quando comparada as nascidas de mulheres adultas[12]. A gravidez na adolescência, portanto, continua sendo um grave problema social, econômico e de saúde.[14]

Segundo Cartes et al[15], os países em desenvolvimento seguem os mesmos padrões sexuais de países desenvolvidos, porém sem oferecer os mesmos níveis de educação e serviços aos adolescentes. Com isso os índices de infecções sexualmente transmissíveis e patologias ginecológicas na idade adulta são maiores nos países em desenvolvimento. Esses autores enfatizam a necessidade de investimentos em programas de saúde sexual e reprodutiva nesses países.

O conhecimento sobre as condições perinatais da adolescente, bem como da saúde do recém-nascido é de grande importância para o uso racional dos serviços de saúde e de educação. A identificação desses fatores possibilita a análise da dinâmica do evento, fornecendo dados que podem ser utilizados para subsidiar o planejamento de ações efetivas voltadas às melhores condições de saúde da mãe e do recém-nascido. Na região do Oeste Paulista são escassos os dados sobre a gestação na adolescência. Desta forma este estudo visou comparar os dados perinatais de mulheres adolescentes e adultas, bem como características dos recém-nascidos de um Hospital do Oeste Paulista entre os anos de 2017 a 2020.

2 MATERIAL E MÉTODOS

2.1 Desenho do estudo

Trata-se de um estudo retrospectivo, de coorte que utilizou banco de dados perinatais, neonatais e de gestantes admitidas em um Hospital do Oeste Paulista entre os anos de 2017 a 2020.

2.2 Considerações éticas

O presente estudo foi aprovado pelo comitê de ética e pesquisa da Universidade do Oeste Paulista e do Hospital Estadual de Presidente Prudente (Protocolo da Plataforma Brasil: 57153522.1.0000.5515).

2.3 Local do estudo

O estudo foi realizado em um hospital do Oeste Paulista, com atendimento exclusivo pelo Sistema Único de Saúde (SUS), que presta atendimento de urgência, emergência e ambulatorial para gestantes, puérperas e crianças nascidas no hospital. Possui vagas cedidas para o Departamento Regional de Saúde (DRS) 11, que realiza o atendimento ambulatorial de gestante de alto risco e algumas especialidades em pediatria. Também realiza cirurgias pediátricas de urgência e eletivas. A DRS 11 abrange 45 municípios, incluindo áreas de assentamentos rurais, onde o nível socioeconômico da população é baixo.

2.4 Amostras

Foram analisados dados de 8.822 prontuários de gestantes adolescentes e adultas e de seus recém-nascidos entre os anos 2017 a 2020. Os dados coletados foram: idade materna, número de consultas realizadas no pré-natal, idade gestacional, tipo de parto, anestesia, Apgar e peso do recém-nascido ao nascer.

O critério de exclusão foi a presença de “Missing Values” em 1.357 prontuários que impediriam as análises inferenciais do estudo.

2.5 Análise dos resultados

Foram comparados os dados de gestantes adolescentes e adultas e para as variáveis quantitativas foram calculadas as medidas (mínimo, máximo, média, desvio-padrão e coeficiente de variação) para caracterização.

Para o cálculo da diferença significativa entre os grupos foram aplicados testes de Mann-Whitney e teste de Qui-quadrado, onde foi adotado nível de significância de 5% ($p \leq 0,05$).

3 RESULTADOS

Dos 8.822 prontuários analisados, foram incluídos 7.465, sendo 1136 (15,2%) de gestantes adolescentes (idade até 19 anos) e 6.329 (84,8%) de adultas (idade acima de 19 anos), dos anos de 2017 a 2020.

A frequência entre os tipos de parto foi similar entre as faixas etárias, exceto no parto cesariano com laqueadura tubária, que só foi realizado nas mulheres adultas e nas gestações de alto risco. Já as gestações de alto risco apresentaram maior frequências entre as mulheres adultas que realizaram cesarianas e a frequência no parto normal foi maior nas adolescentes (Tabela 1).

O parto normal foi registrado em 48,5% das adolescentes e em 33,1% das adultas. O tipo de anestesia utilizada levou em consideração o tipo de parto, pois a anestesia raquidiana sempre é utilizada na cesárea e a local, com ou sem a peridural, de uso exclusivo para parto normal (Tabela 1).

Tabela 1. Número e frequência de adolescentes e adultas de acordo com as características avaliadas no período do parto

Variáveis		Adolescentes		Adultas	
		n	%	n	%
Tipo de parto	Cesariano	103	9,1	544	8,6
	Cesariano com laqueadura tubaria	0	0,0	344	5,4
	Cesariano em gestação de alto risco	481	42,3	3349	52,9
	Normal	372	32,7	1677	26,5
	Normal em gestação de alto risco	180	15,8	415	6,6
Anestesia	Local	165	16,2	769	13,3
	Raquidiana	663	65,2	4494	77,9
	Peridural	153	15,0	412	7,1
	Local/peridural	3	0,3	5	0,1
	Local/raquidiana	1	0,1	2	0,0
	Local/sedação	0	0,0	1	0,0
	Peridural/local	24	2,4	48	0,8
	Peridural/raquidiana	3	0,3	24	0,4
	Peridural/raquidiana/geral	0	0,0	1	0,0
	Raquidiana/geral	0	0,0	4	0,1
	Raquidiana/local	3	0,4	4	0,1
	Raquidiana/sedação	0	0,0	1	0,0
	Raquidiana/peridural	2	0,2	6	0,1
Alto Risco	Não	1087	95,7	5879	92,9
	Sim	49	4,3	450	7,1

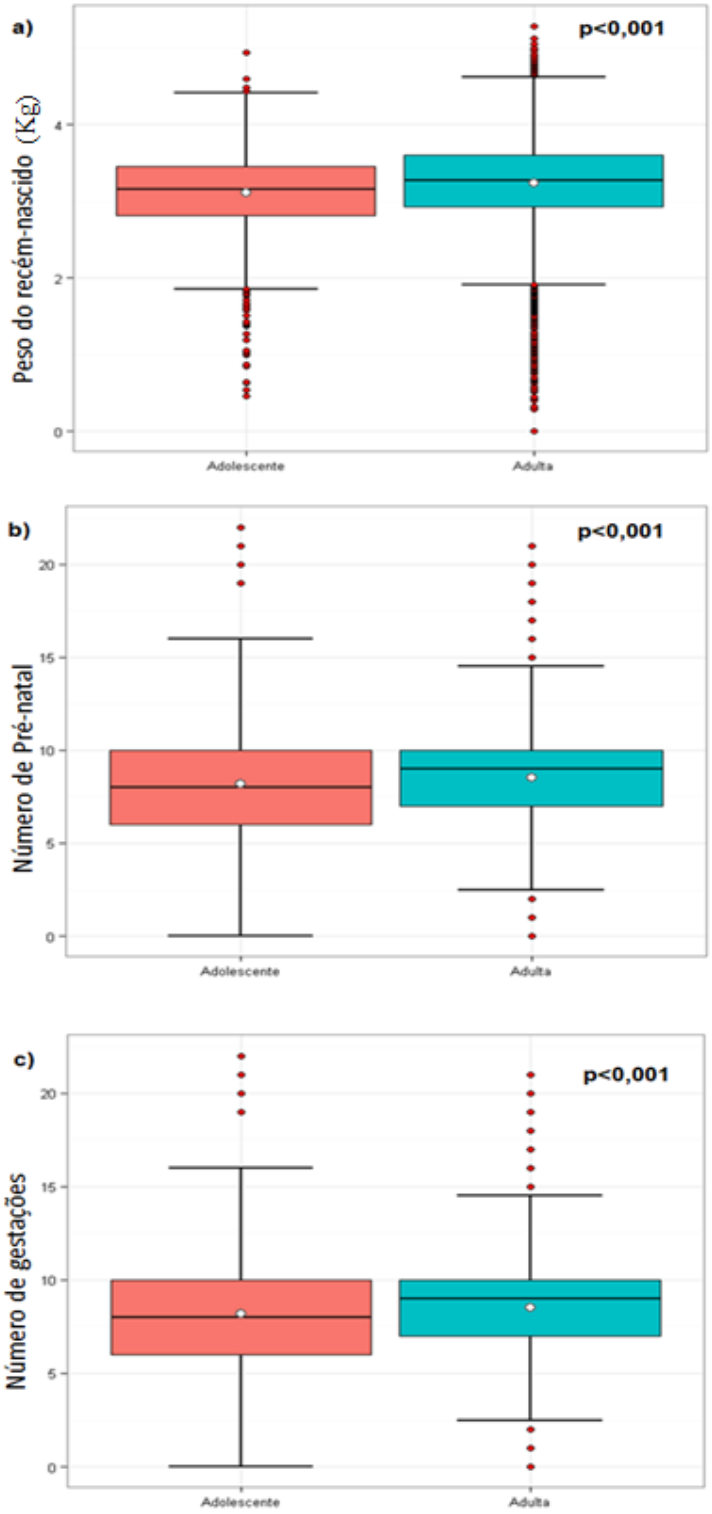
Foram avaliados os pesos dos recém-nascidos, a realização dos exames pré-natais das gestantes, os números de gestações, a idade gestacional, e os Apgar1 e Apagar5 dos recém-nascidos de adolescentes e adultas. Não foram encontradas diferenças significativas em relação a idade gestacional, Apgar1 e Apgar5. Porém, nas demais variáveis houve diferença significativa ($p \leq 0,05$), indicando que os grupos se comportam de maneira diferente em relação a esses elementos (Tabela 2 e Figura 1).

Tabela 2. Características gestacionais de adolescentes e adultas e dos recém-nascidos dos anos de 2017 a 2020 em um hospital do Oeste Paulista.

		Mínimo	Máximo	Média	DP	CV (%)	Valor de p
Idade	A	13	19	17,5	1,4	8,3	-
	B	20	46	28,0	5,8	20,6	
Peso RN	A	0,455	4,935	3,105	0,561	18,0	0,001*
	B	0,290	5,285	3,232	0,581	18,0	
Pré-natal	A	0,0	22,0	8,2	3,0	37,0	0,001*
	B	0,0	21,0	8,5	2,9	33,9	
Gestações	A	1,0	4,0	1,2	0,5	43,2	0,001*
	B	1,0	9,0	2,4	1,3	54,9	
Idade gestacional	A	21,0	42,0	38,4	2,5	6,4	0,7311
	B	10,0	42,0	38,5	2,2	5,8	
Apgar 1	A	0,0	10,0	9,0	1,3	14,8	0,3423
	B	0,0	10,0	8,6	1,2	13,7	
Apgar 5	A	0,0	10,0	10,0	0,9	9,3	0,29693
	B	0,0	10,0	9,6	0,8	8,5	

DP: desvio padrão; CV: coeficiente de variação; RN: recém-nascido; * valores significativos. A: adolescente; B: adulta.

Figura 1. Bloxplot das variáveis com diferenças significativas entre gestntes jovens e adultas utilizando o Teste de Mann-Whitney. a) Pesos do recém-nascidos de mães adolescentes e adultas. b) do número de pré-natais realizados por gestantes adolescentes e adultas. c) Número de gestações prévias entre adolescentes e adultas.



O peso médio dos neonatos das mães adolescentes (3.105g) foi um pouco inferior aos das adultas (3.232g) e na análise de BPN, 121(10,7%) dos recém-nascidos das adolescentes e 564 (8,9%) das adultas apresentaram peso igual ou menor que 2500g ($p>0,05$). Já entre os recém-nascidos acima de 2500g, 1015 (89,3%) foram de mães adolescentes e 5763 (91,1%) de adultas.

Em relação ao pré-natal, a média das mulheres adultas (8,52) foi um pouco superior aos das adolescentes (8,16), porém esses valores foram significativos ($p<0,001$). Entre as adolescentes, foi observada a média de 1,3 gestações prévias e nas adultas 2,4, sendo esses dados já esperados devido a idade das gestantes.

4 DISCUSSÃO

Até duas décadas atrás, a mortalidade infantil era um excelente indicador de saúde, que refletia os níveis de pobreza ou de desenvolvimento dos países. No entanto, a introdução de melhores cuidados em saúde, imunizações e a melhoria dos padrões de nutrição em vários países em desenvolvimento, tiveram um impacto positivo na diminuição da mortalidade infantil. Desta forma, a gravidez na adolescência tornou-se o indicador biodemográfico e de saúde mais exato dos níveis de desenvolvimento em muitos países[8]. A gravidez na adolescência é considerada uma condição de alto risco que leva a problemas adversos psicológicos e perinatal e essas condições não são facilmente resolvidas, pois são os resultados de maus hábitos em saúde[16].

O presente estudo comparou os dados perinatais de mulheres jovens e adultas no período de três anos, em um hospital público do Oeste Paulista e verificou que a frequência de partos ocorridos entre as adultas (84,8%) foi maior do que nas adolescentes (15,2%). Esses valores são similares aos dos últimos dados divulgados pelo Ministério da Saúde[17], que apontam 14% dos recém-nascido de mulheres adolescentes. Essas taxas de gestações na adolescência são consideradas um grande desafio para o Brasil, visto que a gravidez nessa faixa etária pode repercutir na saúde das mães e dos recém-nascidos [10].

A análise dos tipos de partos avaliados neste estudo, apontou que as adolescentes apresentaram uma frequência maior de parto normal (48,5%) quando comparadas as adultas (33,1%). Segundo Santos *et al*[18], um dos fatores que justifica os partos operatórios entre as adolescentes é a ocorrência do baixo peso ao nascer, porém outros fatores são apontados, tais como a imaturidade ginecológica (nas menores que 15 anos) e problemas

anatômicos relacionado ao mecanismo de parto, tais como a insuficiência uteroplacentária.

As médias de peso ao nascimento foram menores nos recém-nascidos de mães adolescentes quando comparados aos de mães adultas, embora os valores sejam próximos. Segundo Gortzak-uzan et al [19], o BPN pode estar associado à prematuridade e à idade materna. Um organismo em fase de crescimento não mobiliza eficientemente as reservas de gordura como um organismo adulto para sustentar adequadamente o crescimento fetal, gerando deficiências devido a competição entre o feto e o corpo materno[18,20].

Além da competição pelos nutrientes, o peso ao nascimento pode estar diretamente relacionado ao número de consultas pré-natais. No presente estudo, em relação ao pré-natal, a média das mulheres adultas (8,52) foi um pouco superior aos das adolescentes (8,16), porém esses valores foram significativos ($p<0,001$). A menor frequência de consultas pré-natais pode levar a um não diagnóstico de anemia materna, que resulta em um baixo peso ao nascer, favorecendo condições adversas ao crescimento e desenvolvimento fetal. Em um estudo realizado por Indarti et al[16], a maior incidência de anemia foi significativamente observada entre adolescentes em comparação com mulheres adultas, sendo a anemia diagnosticada durante o parto significativamente associada com gravidez na adolescencia.

Em relação ao índice Apgar, as médias de 1 e 5 minutos mostraram-se satisfatórias (maior ou igual a 7) em ambos os grupos estudados. No estudo de Muniz et al[10], foi constatado melhor índice de Apgar nos filhos de mãe com idade entre 20-29 anos e a idade acima de 40 anos revelou os menores percentuais. No estudo de Faria et al[21] o Apgar foi superior a 8 em 86,9% dos casos no primeiro minuto e 95,1 % no quinto minuto de vida. Apenas dois recém-nascidos com Apgar inferior a 8 no primeiro minuto eram de mães com 16 anos.

Entre as anestesias utilizadas durante os partos, a raquidiana foi a mais frequente tanto nas mulheres adolescentes, quanto nas adultas. A anestesia raquidiana e a raquidiana combinada com a peridural são as mais usadas nas cesarianas, sendo a primeira considerada de rápido bloqueio nervoso associado a hipotensão, e a segunda uma técnica que permite um início mais gradual e o prolongamento da anestesia durante o período do parto[22]. Um estudo que comparou a eficácia e os efeitos adversos entre a anestesia raquidiana e a raquidiana combinada com a peridural em cesarianas apontou que as mulheres que receberam a anestesia combinada apresentaram mais náuseas ou vômitos

intraoperatórios que necessitaram de tratamento (13/21), quando comparadas as que receberam apenas a raquidiana (6/21). Esse estudo também apontou que não houve bebês com índice de Apgar inferior a 7 aos cinco minutos, independentemente da anestesia[22].

No presente estudo, as mulheres adultas apresentaram maior número de gestações prévias quando comparadas as adolescentes, sendo esses dados já esperados devido as idades das pacientes estudadas. Para melhores resultados, os fatores sociodemográficos, tais como, nível econômico e educacional, história familiar de gravidez na adolescência, início da atividade sexual precocemente, menarca precoce e informação sobre medidas anticoncepcionais, são importantes para o conhecimento da população estudada e implementação de políticas públicas, porém esses dados não foram obtidos no presente estudo.

5 CONCLUSÃO

O estudo foi realizado em um hospital com cobertura total do Sistema Único de Saúde (SUS) e que atende a população mais carente da região, na maioria das vezes com nível socioeconômico baixo. Embora os dados apresentem algumas diferenças entre as gestações nas faixas etárias estudadas, não foram observados fatores que afetaram os desfechos das gestações entre mães adolescentes e adultas, demonstrando que a assistência perinatal se encontra de forma satisfatória na região abrangida pelo estudo. Os dados obtidos são importantes para implementação de políticas públicas educacionais eficazes e eficientes para melhorar a orientação dos jovens na rede escolar. Desta forma, programas de educação sexual e métodos contraceptivos, na família, nas escolas, bem como nos centros de atenção primária à saúde podem contribuir para manutenção e melhorias nos resultados de atendimento perinatal na região do Oeste Paulista.

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ANEXO – NORMAS DE SUBMISSÃO JORNAL DE PEDIATRIA

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Araújo LA, Silva LR, Mendes FA. Digestive tract neural control and gastrointestinal disorders in cerebral palsy. J Pediatr (Rio J). 2012;88:455-64.

2. More than six authors:

Ribeiro MA, Silva MT, Ribeiro JD, Moreira MM, Almeida CC, Almeida-Junior AA, et al. Volumetric capnography as a tool to detect early peripheric lung obstruction in cystic fibrosis patients. J Pediatr (Rio J). 2012;88:509-17.

3. Organization as author:

Mercier CE, Dunn MS, Ferrelli KR, Howard DB, Soll RF; Vermont Oxford Network ELBW Infant Follow-Up Study Group. Neurodevelopmental outcome of extremely low birth weight infants from the Vermont Oxford network: 1998-2003. Neonatology. 2010;97:329-38.

4. No author given:

Informed consent, parental permission, and assent in pediatric practice. Committee on Bioethics, American Academy of Pediatrics. Pediatrics. 1995;95:314-7.

5. Article published electronically ahead of the print version:

Carvalho CG, Ribeiro MR, Bonilha MM, Fernandes Jr M, Procianoy RS, Silveira RC. Use of off-label and unlicensed drugs in the neonatal intensive care unit and its association with severity scores. J Pediatr (Rio J). 2012 Oct 30. [Epub ahead of print]

Books

Blumer JL, Reed MD. Principles of neonatal pharmacology. In: Yaffe SJ, Aranda JV, eds. Neonatal and Pediatric Pharmacology. 3rd ed. Baltimore: Lippincott, Williams and Wilkins; 2005. p. 146-58.

Academic studies

Borkowski MM. Infant sleep and feeding: a telephone survey of Hispanic Americans [dissertation]. Mount Pleasant, MI: Central Michigan University; 2002.

CD-ROM Anderson SC, Poulsen KB. Anderson's electronic atlas of hematology [CD-ROM]. Philadelphia: Lippincott Williams and Wilkins; 2002.

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